The Harveian Lecture

ON

MYELITIS.

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MR. PRESIDENT AND GENTLEMEN,—Let me first thank you, Sir, and the Council of the Harveian Society for the great honour you have done me in inviting me to give this Harveian lecture. It would in any case be an honour to be allowed to deliver a lecture before this society but the honour is greatly enhanced by the fact that this is not the occasion of an ordinary lecture, for I am entrusted with a task the object of which is to do homage to the memory of one of the greatest men we are fortunate enough to be able to number as one of our profession. Harvey's great discovery is ever fresh in our memories and no such lecture as this is needed to perpetuate a name that will live for all time. Nevertheless, such occasions are good if for no other reason than that they serve to incite us to emulate the example of the great men of the past by prosecuting researches in the hope that we may discover fresh truths. Although we are but pygmies when compared with those giants and although we cannot all hope to make great discoveries, yet every little helps, and every opportunity for research if properly cultivated must result in the discovery of new truths which must be to the ultimate advantage of the human race.

In the branch of medicin to which I have devoted more especial attention it would have been possible for me to select a subject the title of which would have suggested a closer connexion with the discovery of the man whose name we honour to-night. In reality, however, it will soon become obvious to you that under the title of "myelitis" I shall have much to say that is very intimately related to the circulation of the blood. One of the chief contentions that I hope to urge upon you is that much of what is spoken of as myelitis is in reality the outcome of interference with the nutrition of the spinal cord by the cutting off of the blood-supply from the affected area. Even if my subject had not been in any way related to Harvey's discovery, however, no apology would have been needed, as I am assured that the council of the society does not expect the lecturer to select his subject with this end in view but that all that is expected of him is that he should deal with some matter of scientific or practical interest. I hope that the subject I have chosen may prove to be both scientific and practical, and, as I have already said, it certainly embraces much that is very intimately related to the discovery of the circulation of the blood.

Myelitis has been chosen as the subject not only because centred around it is much that is of practical as well as of scientific interest but also because I am convinced that many errors cling about the name. It was my anxiety not to miss such an opportunity of giving utterance to my convictions on this point that emboldened me to accept so great a trust and to attempt to deliver this lecture, although conscious that I should fall far short of the standard which an occasion of the kind demands. Many have been the misgivings that have haunted me since I accepted the responsibility, for I have daily become more conscious of the shortcomings of this lecture. Let me at once crave your pardon for the many defects which you will not be slow to detect and let me ask you to accept my assurance that they are not due to any want of appreciation on my part of the importance of the task which has been entrusted to me.

Our first consideration must be what is understood by the term "myelitis." It should mean an inflammation of the spinal cord and in all cases of the kind there should be definite changes of an inflammatory character in the cord. The term "myelitis" has been applied to a malady which apparently is very common, for both in hospital and private practice we daily hear of instances of myelitis, and if we look up the text-books for information we find that myelitis, which is described as a comparatively common disease, occurs with considerable frequency. However, I venture to affirm that myelitis, if the term be strictly applied to an inflammation of the spinal cord, is in reality a rare malady. I am entirely in agreement with Dr. H. Charlton Bastian, whose views have not received the attention they deserved, that much of what is spoken of as myelitis is in reality a softening of the spinal cord consequent on vascular occlusion, in which inflammation plays no part except it be that some inflammatory process in connexion with the walls of the blood-vessels permits of the thrombosis or clotting which results in the cutting off of the blood-supply from some area of the cord, which results in the softening. When a patient falls a victim to hemiplegia as a result of occlusion of a vessel in the brain we speak of the hemiplegia as due to thrombosis with softening and we would not dream of applying the term encephalitis to the process. Indeed, we recognise that encephalitis is a comparatively rare malady. Nevertheless, when precisely the same process occurs in the spinal cord and leads to paraplegia we designate the condition myelitis instead of speaking of the affection as spinal thrombosis with softening. It may of course be comparatively easy to demonstrate thrombosis of a large vessel in the brain, whereas it is very difficult indeed to demonstrate this condition of things in the smaller vessels of the spinal cord. This is one of the reasons why it is difficult to alter the old conception that the condition is a myelitis or inflammation, whereas it is in reality a softening in the cord due to thrombosis.

Let me first call your attention to the difference in the morbid process in the spinal cord in the inflammatory cases as contrasted with those in which there is softening consequent on vascular occlusion, after which I must refer to one or two points of difference in the clinical pictures of the two classes of case. The slides which I shall now throw on the screen are from a case which I studied in conjunction with Dr. Howard H. Tooth, one of my colleagues at the National Hospital for the Paralysed and Epileptic. The changes which were present in the case were identical with those which were found in another case which I had the privilege of studying in conjunction with Dr. Thomas Buzzard of the same hospital. The first slide represents a section from the thoracic region of the spinal cord and the destructive effects of the inflammation are abundantly evident in various parts of the section, notably in the ventral aspect of the cord. The ventral horn on one side is considerably affected, together with the ventral portion of the white matter, while on the other side similar changes are seen, though they are less pronounced. The blood-vessels are engorged and small extravasations of blood are seen in different parts. The dorsal aspect of the cord is not so much affected as the ventral and lateral parts in this case. The next section is from the cervical cord, and the chief morbid changes are in the ventral aspect of the cord generally, including the ventral horns, and there is some affection of the lateral region, but the dorsal portion has largely escaped. Another section from the cervical cord shows even greater damage. The ventral horn is completely destroyed by the inflammatory process, and there is a great deal of inflammation evident in various parts, including the region immediately behind the commissure. The next sections represent higher magnifications of the same regions of the cord to show that the process is truly of an inflammatory character. The round cell infiltration, engorgement of vessels, and in many places actual hæmorrhages are well seen. This condition, which may be legitimately regarded as an acute inflammation, and which is present in some cases, is, I maintain, a rare affection. In contrast to this let me show you what obtains when there is occlusion of spinal vessels leading to softening of the cord. This is a common condition and is generally incorrectly spoken of as a transverse myelitis. I am indebted to Dr. W. Gordon Holmes, the pathologist of the National Hospital for the Paralysed and Epileptic, for his kindness in preparing these sections, the first of which is from the mid-thoracic region of the cord where these lesions are most commonly situated. There is softening of the cord more marked on one side than on the other and due to vascular occlusion. In contrast to the other case to which I directed your attention you can determine by tracing the sections up and down the spinal cord that the morbid process is in reality limited to only a few

segments of the cord, and that in other regions ascending and descending degenerations can alone be detected as secondary consequences of the destructive lesion in the mid-thoracic region. There is not, as in the other case, an inflammatory process which has spread throughout the cord. The next slide shows the condition immediately above the chief seat of the lesion. There is still some softening evident at this level of the cord in addition to the changes due to ascending degeneration of the afferent tracts. Goll's column is completely degenerated but Burdach's column is only affected in part as healthy nerve roots have passed into this tract above the level of the lesion. In the lateral aspect of the cord degeneration is seen in the dorsal and ventral cerebellar tracts. At higher levels of the cord, as we gradually pass away from the area of softening, the degeneration becomes more strictly confined to the ascending tracts, the posterior columns, and cerebellar tracts, and no softening or degeneration is to be seen in other regions of the transverse area of the cord. Below the level of the lesion we find the posterior columns are intact but there is degeneration of the lateral or crossed pyramidal tracts and certain ventral tracts which degenerate in an efferent direction, including the direct pyramidal tracts. At a still lower level of the cord the lateral columns reveal the chief amount of degeneration and although slight degenerative changes are still evident in the ventral tracts no other parts of the transverse area of the cord are affected by softening or degeneration. This class of case is the most common, but although the condition is spoken of as myelitis it is in reality a softening of the cord and not an inflammatory affection such as I first showed you cases of, which are rare.

The time at my disposal will not allow of my saying much in regard to the differences in the clinical pictures of these cases. In the last class of case, in which there is softening of the cord consequent on occlusion of vessels, the onset is often sudden without premonition; it may be even as sudden as in hæmorrhage into the cord, but such cases differ from hæmorrhage in the fact that in them there is much less liability to pain at the onset of the attack. A patient of the kind rapidly loses power and is found to be paralysed in the lower limbs and the lower part of the trunk, and sensibility is affected in the same regions. In contrast to this, in the cases of acute inflammation the patient experiences some premonitory symptoms which point clearly to the existence of a febrile malady. There are a feeling of general malaise, headache, and perhaps rigors, which symptoms are followed by subjective sensations in different parts, notably in the lower limbs, which become progressively weaker until the paralysis ultimately reaches the trunk. It may be arrested there or the process may extend higher until death results from paralysis of the muscles of respiration. There is therefore not the same limitation of the paralysis, as a rule, in the way that usually obtains in cases of softening, in addition to the fact that it is not so abrupt in its incidence. There is much less likelihood of an abrupt onset of paralysis without premonition in the inflammatory cases.

I next wish to direct your attention to the disease which is described as poliomyelitis, acute anterior poliomyelitis, otherwise known as infantile paralysis. From the point of view of scientific accuracy it is well for us to examine our position in regard to this variety of myelitis in the same way that we have done with regard to the other form of myelitis. Different views are held as to the pathology of this affection as in the case of that which we have just discussed. There are authorities who maintain that this condition, like the other, is a true inflammation of the spinal cord. Others, however, hold that the condition is in reality the result of thrombosis which leads to occlusion of vessels. My colleague, Dr. F. E. Batten, in a paper recently published in *Brain*, has recorded three cases of poliomyelitis, and owing to his kindness I am able to show you slides from sections of the cord of one of these patients, reproductions of which sections will be found in his paper. The sections show a process of softening in the ventral horns of the cord, which lesion exists on both sides, although it is more marked on one side. It is not often that we have an opportunity of seeing sections of this kind, so that I am specially indebted to my colleague for supplying me with the slides which I am showing you this evening. I am also glad to be able to show you these sections because they enable me to justify the view as to the pathology of the affection which Dr. Batten supports in his paper. He holds, I think with considerable justification, that the changes met with in the spinal cord in cases of poliomyelitis may legitimately be regarded as due to vascular occlusion rather than as the outcome of an acute inflammation. He is able to show three different stages of the affection in his paper: the acute stage, in which round cells are seen in conjunction with small hæmorrhages and engorged vessels, a stage in which there is softening, and a stage in which sclerosis results, with atrophy of the horn in the most long-standing cases, in which death results years after the actual lesion. He calls attention to the fact that the process is absolutely limited to the region of supply of the branches of the anterior spinal artery, a fact to which Williamson called attention some time ago in a paper dealing with the distribution of spinal vessels and lesions which result when they are affected. The branches of the anterior spinal artery supply the grey matter of the ventral horns and the morbid process in anterior poliomyelitis is limited to the region of supply of these vessels, so that occlusion of branches of the anterior spinal artery would adequately explain the condition of things met with in the disease. In contra-distinction to this there are those who hold that the condition is inflammatory, and Head and Campbell as a result of their researches on the subject have been led to the conclusion that the morbid process is unquestionably inflammatory and not thrombotic. In support of their argument they advance the fact that Mott, in his investigations on the brains of monkeys in which Leonard Hill had ligatured the carotid arteries, was only able to find evidence of chromatolysis of the cells of the brain without evidence of acute inflammation. There was no evidence of engorgement of vessels, round cell infiltration, and hæmorrhagic extravasations such as result in acute inflammatory processes. Dr. Batten, however, points out that the process which results in connexion with the occlusion of a large vessel like the carotid, is scarcely applicable to what may be found as a consequence of occlusion of small vessels, so that blocking of minute capillaries may lead to a condition of things which is quite different to what is met with when a large vessel is occluded. He cites the experiments of Prévost and Cotard, in which these observers, by injecting fine tobacco seeds, were able to produce infarcts in various organs, and congestion, exudation of cells, and hæmorrhages were the early results of the obliteration of small vessels in precisely the same way that these are seen in the earliest stage of acute anterior poliomyelitis. There is thus much to be said in support of the view that Dr. Batten has advocated and which is in accord with the view that Dr. Bastian has advanced to explain much of what is spoken of as myelitis. There seems little doubt that many of these conditions are due to occlusion of vessels rather than to an acute inflammation.

In addition to the arguments which I have already advanced on the subject there is another on which Dr. Batten lays stress—namely, that poliomyelitis is much more commonly met with in the lumbar region of the cord than elsewhere and that the lumbar region is the part whose blood stream is most remote from the heart, while the reinforcing arteries of the spinal roots which supply this region of the cord have a much longer course than elsewhere. So that it is from both standpoints a region of the cord in which thrombosis would be likely to result. In addition to these arguments I must add that the abruptness of onset of the paralysis in many cases of anterior poliomyelitis is another reason why a vascular lesion may reasonably be regarded as the cause rather than a slower inflammatory process. Although we are obviously dealing with a febrile malady in which it may be reasonably supposed that an infective agent is responsible the facts, both clinical and pathological, far better accord with some infective process which leads to affection of the walls of the blood-vessels and that in consequence they become occluded by clot which results in the paralysis rather than that the infective agent is responsible for causing an actual inflammation in the spinal elements as distinct from thrombotic softening the result of inflammatory changes in the walls of the vessels. It is, to my mind, difficult to understand why an inflammatory process should so absolutely limit itself to one region of the cord in the way it does in poliomyelitis. Inflammatory processes such as I had the opportunity of demonstrating in the first slides I showed you this evening do not, as a rule, permit themselves to be bound in by such limitations as are seen in poliomyelitis; they spread irregularly and are not limited to any one region in which they happen to begin. Inflammation is most common in the most vascular regions it is quite true, so that as the grey matter is more vascular than the white it is only reasonable to expect more changes in the grey, but that

the changes should be so limited to the grey matter as they are in poliomyelitis makes it difficult to accept the view that they are inflammatory. Happily for me, I see no eye fixed upon me fortified by a monocle or I should scarcely dare to tell you that chronic myelitis is a myth for fear that I might be branded with a monosyllable whose synonym has been expressed as "a terminological inexactitude" in another assembly. I am, of course, familiar with acute myelitis which does not get well and which leaves behind it a chronic condition of things which remains with the patient for years and when the patient dies a chronic process is found in the spinal cord. That chronic process, however, is the remains of an acute condition in the past. I am also familiar with cases of compression of the spinal cord in which a slow softening results in connexion with a progressive inflammatory change. In some of these cases there undoubtedly is an extension of inflammation from the cause of the compression in addition to interference with the vascular supply of the part compressed. So that both a process of inflammation and one of softening consequent on thrombosis account for the clinical picture. Again, I am familiar with the cases in which meningo-myelitis occurs, of slow progress, where an inflammatory process commencing in the membranes of the spinal cord leads secondarily to inflammation in the cord itself. A process of this kind may be, of course, slow in its progress and may be due in part to extension of inflammation and in part to interference with the vascular supply of the cord. Furthermore, I am of course familiar with the effects of syphilis on the spinal cord, in which the syphilitic process occasions slow and progressive changes in the cord. But in syphilitic cases even the process is largely vascular and the main effect is an endarteritis with thrombosis or, if not actual thrombosis, interference with the vascular supply of the cord. It is to none of these cases that I refer when I say that chronic myelitis is a myth but to cases in which it is said that a slow progressive inflammation of the spinal cord may result as a primary affection and in which injury, exposure to cold, the rheumatic or the gouty states, and similar causes are said to be capable of starting an interstitial inflammation in the connective tissue of the cord, which slowly progresses and causes damage to the spinal nerve elements, which leads to a slow but progressive paralysis which may ultimately lead to the death of the patient. We are told by those who have written on the subject of chronic myelitis that the condition is one which may be induced by the same causes as are capable of producing an acute myelitis, so that the same causes acting over a longer period of time in lesser degree may set up a process of chronic inflammation in the cord. It is with this form of chronic myelitis that I entirely disagree. I am familiar with the various forms of myelitis to which I have already referred, but I do not agree with the view that there is a form of chronic myelitis such as I have just described.

If I succeed in doing nothing more this evening than inducing everyone in this room to look with suspicion on any case that appears to be chronic myelitis in future I shall be satisfied that my efforts have not been in vain, for I know that by so doing I shall be instrumental in rescuing not a few patients from a state of permanent paralysis which might be cured if a diagnosis other than chronic myelitis were made. How, then, are we to explain or to account for cases that have been regarded as chronic myelitis in the past? There are many conditions that claim cases that have been so regarded. Let me show you lantern slides of one or two conditions that have undoubtedly been mistaken for chronic myelitis in the past, though with our increased knowledge of these diseases they are now correctly diagnosed. The first condition to which I wish to refer is disseminated sclerosis. There is no doubt that the spinal form of disseminated sclerosis accounts for many cases that hitherto were regarded as examples of chronic myelitis. You find in the spinal form of this affection a slowly progressive paralysis of the lower limbs in exactly the same way as we have been told that the paralysis occurs in chronic myelitis and this malady may go on for many years limited to the spinal cord in this way, and in consequence an erroneous diagnosis is made. This section which I now exhibit is from the cervical region of the cord and shows that a considerable portion of the white matter in the ventral part of the cord has escaped degeneration, as has the grey matter. The next section shown is from the thoracic cord and reveals a more extensive involvement, so that but little of the white matter has escaped, and you can readily understand how such an affection of nearly the whole transverse area of the cord would lead to paraplegia in the same way as if a myelitic process had affected the same transverse area of the cord. Here is another section lower down in the thoracic region abutting on the lumbar in which we have a less extensive affection of the white matter of the cord by sclerosis, whereas a section from the sacral region shows that the whole of the transverse area of the cord is affected. The nerve roots are, of course, undegenerate, which proves that in this disease, although the process is so diffuse, the grey matter escapes in great measure. The ventral horn cells do not undergo degeneration to any extent and in consequence the ventral roots escape degeneration.

Another malady which probably has accounted for mistakes in diagnosis in the past is the disease of which I now show you slides and for which we have no short name, so that for want of a better it has been called subacute combined degeneration of the cord. This is the best name we could formulate for the condition in a paper published in conjunction with my colleagues Dr. Batten and Dr. J. S. Collier of the National Hospital for the Paralysed and Epileptic. This disease is another in which a slowly progressive paraplegia results and all the manifestations from the point of view of the paraplegia are such as would accord with the descriptions of chronic myelitis in the past. There are certain distinctive features in the clinical picture of these cases but time will not permit me to go into these details this evening. The sections show that in the cervical region there is only a little degenerative change in the white matter of the ventral region and that the main degeneration is in the posterior or dorsal tracts and in the lateral columns of the cord, including the cerebellar as well as the pyramidal tracts. In the thoracic region there is much more extensive affection and nearly all the white matter has undergone degeneration except that which immediately abuts on the grey. Otherwise there is extensive degeneration throughout the transverse section of the cord—a condition of things which you will remember closely simulates the appearance which you saw in the case of softening of the cord, the result of vascular occlusion, which is commonly regarded as a transverse myelitis. You can thus readily understand how a paraplegia may result from a lesion of this kind in the spinal cord in the same way that paraplegia has been supposed to result from chronic myelitis. A section from the sacral region shows that there is still some degeneration of the pyramidal tracts, merely a descending degeneration, and that otherwise the section of the cord is fairly free from any degenerative change. The process of degeneration is accordingly most pronounced in the thoracic cord, though it affects other regions and leads to secondary ascending and descending degenerations as would result from myelitis, and to a form of paraplegia that may well have been regarded as due to chronic myelitis.

It is not, however, to either disseminated sclerosis or this affection that I especially wish to direct your attention this evening in dealing with the importance of a correct diagnosis when chronic myelitis is supposed to be present, because, unfortunately, no treatment that we know of can influence materially the clinical course of either of the two diseases to which your attention has been called. It is the possibility of tumour of the spinal cord that I particularly beg you to have in mind when you are presented with a case that suggests that chronic myelitis accounts for the clinical picture. There are, of course, tumours of the cord which are inoperable, as evidenced by this section of an intramedullary tumour, with the cord surrounding the growth. I do not suggest that a correct diagnosis in such a case as this would place the patient in any better position than if a chronic myelitis were diagnosed, as an intramedullary tumour of this kind is, of course, beyond the possibility of aid from the surgeon. This other tumour, although it has destroyed only half the cord, would not permit of operative interference that would materially assist the patient. It is rather to those cases in which tumours grow outside the cord and compress it that I would call your attention. A tumour of that kind growing from the theca or from a nerve-root and compressing the cord in this way is a tumour which lends itself to operative intervention, and a tumour growing in this way may produce a clinical picture which may simulate that which has been described by the older writers as characteristic of chronic myelitis. I cannot better impress you that what I have

said in regard to tumours of the cord simulating chronic myelitis and chronic myelitis being diagnosed where tumour really exists is no exaggeration than by quoting the following case which was rescued from a "home for incurables" by my present house physician, Mr. H. Morriston Davies. The patient was a woman aged 55 years. She was single and was admitted into University College Hospital under my care complaining of loss of power in both legs. This condition commenced with feelings of numbness in her feet in December, 1904, and the weakness in her legs first commenced in May, 1905. The weakness continued for a time and then she apparently recovered and was able to get about. But she relapsed afterwards, and at the end of a month after her relapse she began to have some difficulty in passing her urine, so that retention resulted. Throughout the whole course of her illness up to that time she had had no pain in her back and no radiating pain in her limbs, no girdle sensation or anything of the kind which might be expected from a tumour growing outside the cord and pressing upon it. This shows that there need not necessarily be pain in cases of tumour of the cord and that thus a tumour may come more closely to simulate what is expected in chronic myelitis. Later in her clinical history she complained of some pain, shooting up from her feet to the knees, but never up to the time I saw her had she had any pain in her back or any girdle sensation or pain radiating into the limbs. She, however, complained of pain in the gastric region six months or so before she came under my observation, and this proved to be due to a gastric ulcer. She had vomited and subsequently hæmatemesis occurred. The ulcer, however, healed under rest and appropriate treatment. When she came under my observation she had very marked spastic paraplegia with anæsthesia, the knee-jerks were exaggerated, there was ankle clonus, and the plantar reflex was of the extensor type. The limbs were wasted generally but there was no obvious wasting of any definite groups of muscles. The skin was dry and harsh and she had a sacral bedsore. In discussing the case with the students I pointed out how the condition might quite well accord with what had been described as chronic myelitis and also how the diseases disseminated sclerosis and subacute combined degeneration of the cord might account for the morbid picture which, for various reasons, we concluded was due to a tumour compressing the cord. The patient was submitted to my colleague Sir Victor Horsley who performed laminectomy. A tumour of the size of a filbert was found on opening the theca after removing the sixth and seventh thoracic spines. The eighth had also to be removed in order to free the lower edge of the tumour and it was elevated from its bed and the patient is making a satisfactory recovery. This, remember, in a patient who was in a place where she would have remained paraplegic for the rest of her days if she had not been accidentally discovered.

Time will not permit me to multiply examples of this kind, but in justice to chronic myelitis it is only fair that I should say that it is not the only condition, hypothetical or otherwise, that has been responsible for claiming cases that are in reality examples of tumour of the spinal cord, and, further, that cases may appear to be due to tumour which, while not due to chronic myelitis, are due to a form of chronic meningitis about which I can tell you very little. Only one case of the kind has come under my observation—where I diagnosed tumour in a woman and recommended operation and where the patient was operated on by Sir Victor Horsley. No tumour was found but a condition of chronic meningitis existed. Sir Victor Horsley tells me he has had a considerable experience of this kind of case but it is the only instance I have seen and I confess that I do not at present see how such cases are to be diagnosed correctly from cases of tumour of the cord. Sir Victor Horsley has promised to place his cases on record, so that we must look forward to his paper for further information on this important subject.

I cannot conclude without a word or two in regard to prognosis and treatment in myelitis. The point I wish to make clear in regard to prognosis is, how uncertain this is in these cases. Patients who are seemingly in a hopeless condition from myelitis may get well under appropriate treatment. I should like in this connexion to quote, if you will allow me, two cases. One is the case of a young man, who was seen in consultation with a medical man who is present this evening. He was aged 18 years and had never been in the way of contracting specific disease and there was no evidence about him whatever of syphilis. From a vague state of ill-health he fell into a condition of paraplegia which was so severe that one of our best authorities on nervous diseases who saw the patient gave a most unfavourable prognosis. The patient, however, subsequently, under careful treatment, made an uninterrupted recovery and is now completely well. So that whereas at the outset he had all the evidences of an acute infective process, including a scarlatiniform rash and acute cystitis in association with paralysis of his sphincters, he made a recovery so complete that now, up to the last time anything was heard of him, and when he passed from observation, even his bladder had completely recovered. Another case which I would like to quote is that of a man, aged 24 years, who was admitted into University College Hospital under my care. He developed a paraplegia which was gradual in its onset, taking about two days in all to reach its maximum, and the condition being preceded by pain in the back and general feelings of malaise for about 24 hours antecedent to the first manifestations of his paraplegia. This man had paraplegia so severe that his limbs were absolutely flaccid, his knee-jerks had disappeared, as had the ankle-jerks and the plantar reflexes. He had severe burns on his feet from hot-water bottles before he was admitted into the hospital, a sacral bedsore, and cystitis. He denied specific disease and no evidence of syphilis could be determined. His condition was about as bad as it was possible to imagine in any case of myelitis, and yet under careful treatment he, like the lad to whom I have just referred, made a steady and uninterrupted recovery, so that now he is able to walk perfectly well and has completely recovered the functions of his bladder.

At this late hour in the evening I do not propose to detain you longer than just to advocate one measure of treatment in myelitis. Irrespectively of whether the patient be suffering from syphilis or no, I am convinced that there is no treatment that can compare with mercury and that mercury rubbed in is to be preferred to mercury given by the mouth. Mercurial injections, of course, in acute cases where the disease is rapidly spreading are highly desirable. But in ordinary cases where we have time to treat our patients more deliberately mercury by means of inunction is especially to be recommended. In all the cases I have anything to do with where we are dealing with myelitis I never fail to recommend this measure in treatment and I share Sir Victor Horsley's belief in the value of local inunction. Whether mercury is rubbed into other parts or not it should certainly be rubbed along the spinal column. In all the cases with which I have had to deal this mode of mercurial treatment has been adopted. It was so in both of the successful cases to which reference has been made, in neither of which could any evidence of syphilis be obtained.

A Lecture

ON

TUBERCULOSIS OF THE CÆCUM, ILEO-CÆCAL VALVE, AND APPENDIX,

WITH FOUR UNPUBLISHED CASES.

Delivered at the Medical Graduates' College and Polyclinic, London, on May 14th, 1906,

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GENTLEMEN,—When tuberculosis of the intestine forms a solitary well-marked tumour the ileo-cæcal valve or the cæcum is usually the part affected and the tumour is therefore in or near the right iliac fossa. Tubercle of the rectum is not uncommon but usually leads to ulceration and fistula rather than to tumour. It is not that the process in the two localities is essentially different. If we felt ileo-cæcal or appendical tuberculosis from within we should often call it an ulcer; if we felt rectal tuberculosis from without we might describe it as a tumour. These forms of tuberculosis of intestine must be distinguished from the often extensive ulcerations which complicate the last stage of pulmonary tuberculosis. Tubercle of the appendix is said to be nearly always secondary to disease of the cæcum but it is

possible that it is sometimes primary and overlooked owing to ulcers of the appendix not always being examined with a view to their precise bacteriological origin. In the cases which I am going to describe the dominant factor was the disease of the ileo-cæcal valve and of the cæcum. In what proportion of cases cæcal tuberculosis is secondary to infection elsewhere, especially of the lungs, is still unsettled. Even when pulmonary tuberculosis co-exists it does not necessarily follow that the cæcal trouble is truly secondary to that of the lung. The two parts of the intestinal canal which above all others we should expect to be liable to be infected from bacteria in food and its products are the ileo-cæcal region and the rectum. Because there fæces lodge and time is given for bacteria to penetrate.

Ileo-cæcal and appendical tuberculosis may be ulcerative, or hyperplastic, or peritoneal. Even in the ulcerative variety there is usually some thickening accompanied by congestion and a tendency to form adhesions. On opening the appendix, if that organ be affected ulceration is seen, often visibly caseous. The tubercles affect every layer of the wall, submucous, muscular, and even serous occasionally, as well as mucous. But the mucous and submucous layers are affected most. Similar changes are observed in the cæcum when that is diseased. In my own cases a small abscess lay between the appendix and Poupart's ligament in one and in another the meso-cæcal glands were extensively affected (full of almost fluid cheesy matter) and the meso-cæcum itself enormously thickened (byperplastic). The essential feature of the hyperplastic variety of intestinal tuberculosis is the thickening, often very great, of the organ, mainly due to connective-tissue proliferation in the submucous layer. It is this, combined with the thickened meso-cæcum and its contained glands, and occasionally with a small abscess, which produces the palpable tumour. A part of the appendix often escapes even when the rest is seriously affected. Bouglé, quoted by Battle and Corner, says that the base of the appendix rather than the tip is affected, the contiguous part of the cæcum often being involved. "Hence it is close to the cæcum that perforation of tuberculous ulcers is most likely to occur."

The *symptoms* of tubercle in the region of the appendix and cæcum are mainly those of chronic or of subacute inflammation. When the cæcum is not involved the usual diagnosis is that of chronic appendicitis. When the cæcum is also affected and when, owing to hyperplasia, a tumour can be felt, and especially in the common case of the patient's not being young, malignant disease is often suspected. With either tuberculous or carcinomatous ulceration of the ileo-cæcal valve blood and mucus may occasionally appear in the stools; irregularity of the bowels, either constipation or diarrhœa, may occur; and tubercle bacilli may not be found in the stools even if the disease be tubercle, especially if it affects the appendix only. With either tuberculous or carcinomatous disease of the cæcum great wasting occurs. My elderly patient was reduced to a weight of less than five stones. But however ill my tuberculous patients were they had not the facial aspect of sufferers from cancer. On the contrary, they had the delicacy of tuberculosis, its thin, smooth skin, long eyelashes, and bright eyes. The history of the patient, and in a less degree that of his family, may be significant. Nevertheless, the actual diagnosis is only made by operation.

A graphically reported case which illustrates some of the above-mentioned points was published in THE LANCET by Mr. H. W. Page.[1] A woman, aged 36 years, in St. Mary's Hospital, had suffered from abdominal discomfort, more or less, for 18 months. Nine months before admission she had an attack of pain in the right iliac fossa accompanied by vomiting and constipation. Attacks of the same kind, two or three in number, but of less severity followed at intervals, and in one which occurred shortly before her coming to the hospital a distinct lump had been felt in the iliac region. Now, under anæsthesia, "a small, hardish lump" was still felt in the cæcal region. With dieting and rest in bed the pain was relieved and the patient was prepared for an appendicectomy. It should be, and was, noted that the patient was pale and emaciated and showed the scars of glandular ulceration in the neck. Laparotomy discovered a healthy appendix and a tumour of the cæcum as large as a hen's egg, bound by firm adhesions both to the abdominal wall and to the iliac fossa. This was nine years ago and it is therefore not surprising that the removal of the tumour was not attempted. After this patient's death an exhaustive necropsy by Dr. F. J. Poynton showed a cæcum much ulcerated and thickened by chronic inflammation and an ileo-cæcal stricture half an inch in length of almost cartilaginous hardness and only admitting the passage of a probe, extensive ulceration on the cæcal side of the stricture, and perforation "at a point contiguous to it." From this perforation the patient had died. No ulceration was found elsewhere but in front of the duodenum was a caseous gland of the size of a small orange and there was an old scar just below the apex of the right lung. Microscopically "the bowel showed chronic inflammation without sign of either sarcomatous or carcinomatous growth and although not definitely tuberculous it was almost certainly of this nature."

Here we have exemplified the tumour in the right iliac fossa, rather small, rather hard, and chronic in comparison with that caused by ordinary appendical or perityphlitic abscess; the long history of abdominal discomfort with occasional acute attacks, the well marked loss of weight, and the suspicion of malignancy (in spite of the presence in this case of the scars of old tuberculous cervical glands), the laparotomy and the closure of the abdomen without removing the growth, the death (in this instance from perforation), and, finally, the post-mortem appearances as just given. I believe that scores of surgeons could each relate from his own practice a case with a close resemblance to the above.

In April, 1904, my friend, Dr. G. Sidney Shute of Gravesend, and I had a female under our care, unmarried, and aged about 60 years. Her personal history resembled that just given of the patient in St. Mary's Hospital. She was so emaciated that she had sunk in weight to between 4 and 5 stones! There was a small hard tumour in the cæcal region adherent to the iliac fossa and to the outer half of Poupart's ligament. On April 24th, assisted by Dr. Shute and Mr. G. W. Micklethwaite, I operated and found a small abscess with the appendix at the bottom of it. The ileo-cæcal junction was greatly thickened. Taking precautions to protect the general peritoneal cavity I therefore freed the whole mass of diseased intestine completely and bringing it outside the abdomen fixed it there, gauze-packing the abscess cavity. The next morning I opened the ileum, making a temporary artificial anus. The ileo-cæcal valve was almost impervious and much ulcerated. On May 27th I excised the cæcum and the ileo-cæcal valve and now found the peritoneal coat of the ileum studded with small tubercles. I fixed and left the ascending colon and the ileum, both open, side by side in the wound. For the next four months the fæces passed through the ileostomy, but the large intestine was kept well supplied with water. During this period the patient's general condition and good spirits improved enormously. She put on nearly 3 stones in weight. On Sept. 21st I performed enterorrhaphy by Maunsell's method and closed the wound. The patient has been well ever since. It should be mentioned that the peritoneal tubercles seen at the second laparotomy had all disappeared at the third—namely, in the period during which her fæces were passed through the ileostomy and during which she put on so much flesh. Both this case and the next show how the general nutrition can be not only kept up but greatly improved without the assistance of the large intestine except as an absorber of water.

In October, 1904, a girl, aged 16 years, was admitted into the West London Hospital with the diagnosis of chronic appendicitis. I had seen her a year before with Dr. T. Matheson Ness. She was then suffering from a subacute attack, with vomiting and abdominal pain and tenderness, mainly in the right iliac fossa. With rest and medical treatment she improved at that time. She had on coming into hospital a distinct tumour of considerable size, had lost flesh, and looked very delicate. At the operation on Oct. 14th, 1904, the appendix and ileo-cæcal valve were found much thickened but the greater part of the tumour was a meso-cæcum full of large, cheesy glands. The course pursued was similar to that in the preceding case. The ileostomy was left open for three months, during which the large intestine was well supplied with water. The patient put on flesh. Tubercles seen on the peritoneum at the earlier operation had disappeared before the final one. In this case the right Fallopian tube was diseased and adherent to the mass of intestinal and mesenteric disease. I removed it but left the ovary which appeared normal. This patient has had good health since but has been troubled a little with small subcutaneous abscesses due to unabsorbed sutures.

[1] THE LANCET, July 3rd, 1897, p. 10.

In the treatment of both these cases great care was taken to make it as much "open air" as the means at our command permitted. The elder patient had the advantage in this respect, as, being a private case, the windows could be opened without regard to anybody's welfare but her own, and she has also been able to make prolonged stays at the seaside. She has regained more vigorous health than the younger. Still the latter has done well and benefited by a stay at the Yarrow Home, Broadstairs. It is interesting to add that through the generosity and gratitude of friends of the younger patient the hospital in which she was treated has profited to the extent of £575, which illustrates what I should venture to state as an established fact that our hospitals are supported by their beds—i.e., by the work done in them. It is a pity that committees and secretaries are prone to be disposed to fritter away the earnings of the beds on bloated and abused out-patient departments.

A case of tubercle of the appendix and of the meso-cæcal glands.—The patient, aged 11 years, was admitted into West London Hospital on July 16th, 1901. On July 7th she had complained of great pain in the right groin which was very acute at times and had been more or less severe since. She had been subject to similar attacks off and on for the last two years. She had had measles and whooping-cough but not scarlet fever. The bowels were opened freely after a simple enema. The patient appeared to be a healthy, well-fed child with no marked abnormality of any kind. When asked to point out the seat of pain she placed her hand on the abdomen below, and a little to the right of, the umbilicus. The lungs and the heart appeared healthy and the resonance note of the abdomen was quite normal. On palpating a certain abnormal feeling of resistance could be felt over the region of the cæcum.

On July 19th an incision of about three inches was made along the right linea semilunaris. The cæcum was drawn out and the appendix was found to be bound down tightly to the gut by tuberculous adhesions. The appendix was excised and the stump was invaginated and stitched. A large tumour lying behind the peritoneal attachment of the cæcum was next cut into and a mass of curdy pus was evacuated. The cavity was then scraped and iodoform gauze packing was inserted. The cavity was then approximated to the operation opening and fastened by a few sutures to its edges. The gauze packing projected outside and the wound was partially closed. A few smaller glands in the mesentery were left untouched. On the 20th the wound was dressed and the iodoform packing was removed and fresh packing inserted. On the 22nd the wound was again dressed and fresh packing was inserted. There was slight pain at intervals. On the 23rd the bowels were moved slightly and there was some pain. On the 24th the patient was very restless. She complained of pain in the lower bowel. Rectal examination showed masses of scybala. A simple enema gave relief. The wound was again dressed on the 25th. The patient had had a comfortable day and she slept at night. She was discharged from hospital on August 22nd, the wound having quite healed (34 days after the operation). The temperature, 100° F. on admission, never once rose above 99° after the operation.

Now, with regard to tuberculosis confined to the peritoneal coat of the cæcum and appendix. By chance I operated on a case of this description only yesterday (May 13th). A tall, well-made, and well-developed young woman, aged 19 years, is described as having been the picture of health till a year ago, when she began to be worried with recurrent abdominal pains, rather vague in situation but more in the right side than the left. Once appendicitis was diagnosed. Vague as they were these pains and illnesses were described as making life scarcely worth living. What was thought to be the appendix and ileo-cæcal valve could be felt by palpation and was tender. Her only brother had had appendicectomy performed. Her bowels were irregular, generally constipated. At the operation the incision was made over the appendix but I first through this incision palpated the gall-bladder. The appendix and the ovary felt normal though the former, as in her brother's case, was rather long. The cæcum was now pulled out. I examined the appendix, cæcum, meso-cæcum, and part of the ascending colon very carefully for abnormalities and especially for tubercles but noticing only one solitary suspicious and very minute nodule was going to give up the search when, turning the cæcum over, Dr. H. J. Davis, who was present, observed a colony of tubercles confined to the under or right side of that viscus. One tubercle only was discoverable on the appendix itself near its base. The omentum and a coil of small intestine with its mesentery were now searched for tubercle with a negative result. The parietal peritoneum appeared quite free and no glands could be felt. The wall of the cæcum was perhaps a little thick. I removed the appendix, which when slit up showed a rather granular catarrhal condition of the mucous membrane. It had contained a small fæcal concretion which I had slipped on into the cæcum while manipulating it. I did not feel called upon to remove this cæcum. The disease is in an exceedingly early stage, the patient is personally vigorous, and she is in a position to live an outdoor life and to stay at the seaside or in the country as long as may be desired. And it will be granted that serious operations for local manifestations of what *may* be a more generalised condition should be resorted to with discretion.

Those who wish to make acquaintance with anatomical and histological details of tuberculosis of the cæcum and appendix will find them fully and lucidly given, with admirable illustrations, in Dr. Howard Kelly's great work on the appendix.

A conviction which I published some years ago and have often expressed is that general tuberculous peritonitis often arises in tubercle of the cæcum or in the meso-cæcal glands, that whenever laparotomy is performed for that disease the cæcum, meso-cæcum, and appendix should if possible be examined, and, at least in males, the question should be entertained of incising in the right iliac region rather than in the median line. In females, of course, there is always the possibility of the primary focus being in the left uterine appendage. These views were brought forcibly home to me by a case in which I excised a small tumour from the cæcal region. It lay near the junction of the meso-cæcum with the ascending meso-colon and proved to be a bag of cheesy pus, so thin-walled that the slightest blow would have extravasated its contents into the peritoneal cavity, and the same views are supported by the cases just related. Further, these cases show that in dealing with this singular disease it is not too late to lock the stable door even when the horse is apparently stolen.

Lastly, I would point out that there might be a fair hope of curing ileo-cæcal and appendical tuberculosis without excising the disease, and merely by an ileostomy combined with suitable general treatment. I infer this from the good results I have seen ensue from treating extensive tuberculous ulceration of the rectum with fistulæ, by simple scraping combined with an inguinal colotomy kept open until the tuberculous ulceration had thoroughly healed. But I think excision preferable. Whether an ileo-sigmoidostomy would prove curative or not is doubtful. After that operation fæcal matter is not long before it finds its way back along the colon to the cæcum.

A MEANS OF CHECKING THE SPREAD OF "SLEEPING SICKNESS."[1]

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THIS paper has been drafted to indicate to those who have not followed the subject closely the wide distribution of human trypanosomiasis in Africa, to demonstrate the rapidity with which the disease is spreading, and to suggest measures intended to check further extensions.

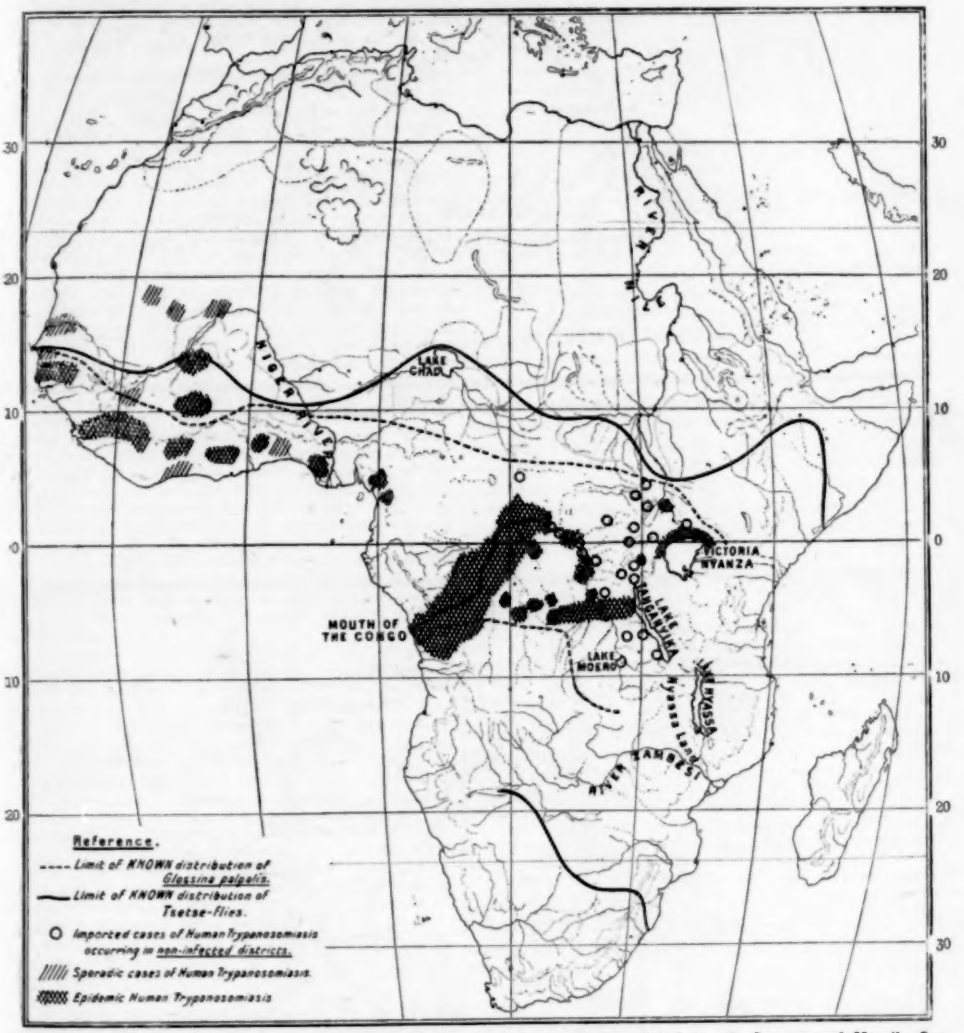
Map 1 represents the distribution of sleeping sickness as known at present. The parasite causing the disease, the *Trypanosoma gambiense*, is ordinarily transmitted from infected to healthy persons by the bite of a tsetse fly, *Glossina palpalis*. We must therefore expect human trypanosomiasis to spread to the limits of the distribution of this fly. The northern and southern limits of the area in which *Glossina palpalis* has been found are indicated by dotted lines. Its actual distribution will certainly be found to be much wider. There are seven other varieties of tsetse flies and, until the contrary is proved, we must consider the

[1] For particulars of the observations and arguments on which this paper is based see Memoir XVIII., Liverpool School of Tropical Medicine, and the forthcoming volume of the Transactions of the Epidemiological Society, from which Maps 2 and 3 and many of the facts are taken.

possibility of each of them being also a carrier of the infection. The part of Africa within which tsetse flies are found is roughly limited by an uninterrupted line. In any case it is evident from an inspection of Map 1 that the uninfected areas of the Soudan, Northern Nigeria, German East Africa, British Central Africa, &c., are in the greatest danger of being infected.

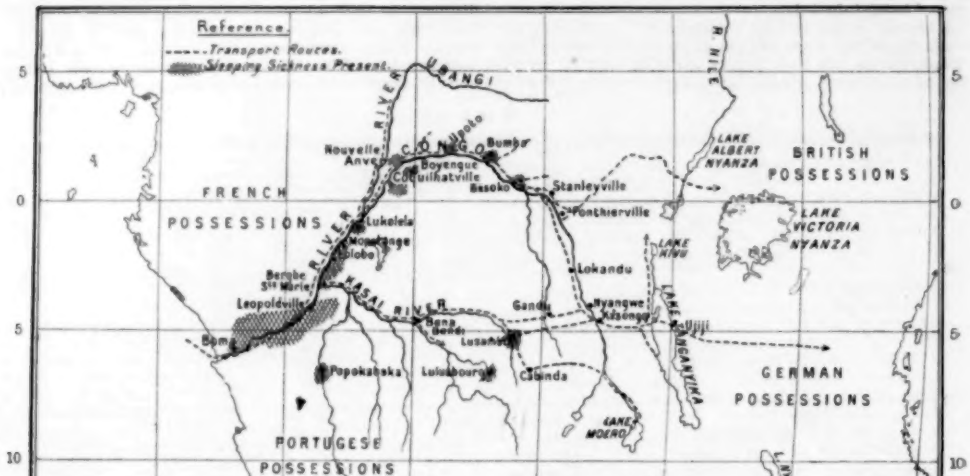
The history of the various epidemics of human trypanosomiasis shows that it *spreads* but comparatively slowly from an infected area but that it may easily be *carried*, by the advent of an infected person, into localities where it did not previously exist. In the Congo Free State it is, for example, along the main routes of communication that the disease has spread. Two maps representing respectively the distribution of the disease in the Congo basin in 1897 and 1905 are annexed to demonstrate this point. Before Europeans entered the Congo basin sleeping sickness seems to have been confined to the region of the Lower Congo and to the banks of the main river as far up as Bumba (1884). No record can be obtained of its existence elsewhere. With the coming of the white men steamers were introduced on the rivers, caravan roads were opened up, and long distance transport became easier and more rapid. Expeditions were sent in various directions to open up the country and military operations were commenced against the Arabs. These large undertakings involved an unprecedented movement of men. Natives—soldiers, workpeople, and their wives—were brought from infected districts to places previously free from the disease. In 1897, 12 years after the foundation of the Free State, cases of sleeping sickness were reported among the natives about Luluabourg and Lusambo (Map 2), places uninfected in 1884. The caravan routes between Lusambo and Kasongo were formerly much used. It was along these routes that the troops directed against the Arabs advanced. Caravans carrying supplies to the posts in the eastern part of the Free State passed over the same roads which were also used by native and Arab traders. From Kasongo to Baraka and Albertville on Lake Tanganyika go very important caravan routes over which pass the whole of the supplies to the region about Lake Kivu and Lake Tanganyika north of 5° S. In 1896 the caravan route between Lusambo and Kasongo was closed and the transport between the east and west of the Free State went instead up the Congo in steamers to Stanleyville and thence

MAP 1.



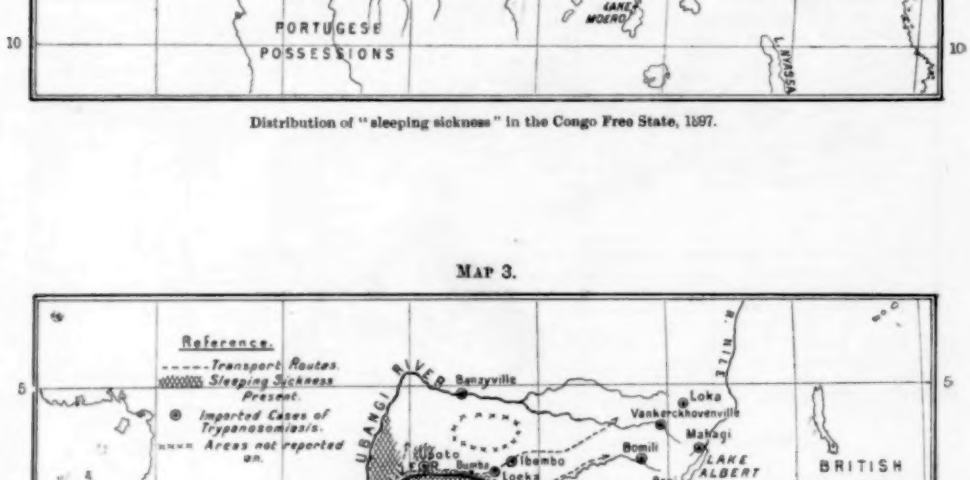
Known distribution of human trypanosomiasis and tsetse flies in Africa, 1905. Compiled from:—1. Laveran and Mesnil: Les Trypanosomes et les Trypanosomiases, 1904. 2. Report No. VI. of the Sleeping Sickness Commission of the Royal Society. 3. Memoir XVIII. of the Liverpool School of Tropical Medicine.

MAP 2.



Distribution of "sleeping sickness" in the Congo Free State, 1897.

MAP 3.



Distribution of "sleeping sickness" in the Congo Free State, 1905.

by canoes to Kasongo. Map 3 plainly shows the results of these movements. Sleeping sickness has spread along the most important overland routes and up and down the Congo from Kasongo until there are only comparatively small stretches of river between Stanleyville and Kasongo still uninfected. Posts in uninfected districts at which imported cases of sleeping sickness have been reported are indicated by circles. They give some idea of the frequency with which "clean" districts are exposed to infection. All these imported cases are soldiers, labourers, or their wives brought *long distances* from their homes as a direct result of the opening up of the country by Arabs and Europeans. It is evident that if such persons were removed from uninfected districts and if the ingress of others were prevented much would have been done to check the spread of human trypanosomiasis.

It is well known that negroes in the first stages of human trypanosomiasis are often apparently well, make no complaints, and work as effectively as any healthy individual. A means of detecting such cases has recently been devised. Enlarged lymphatic glands had long been observed to occur in cases of trypanosomiasis. Greig and Grey showed that trypanosomes could easily be found in the juice aspirated from such glands by means of a hypodermic syringe. By using this method we found in the Congo that in practice every negro whose neck glands are enlarged without obvious cause must be considered to be a case of trypanosomiasis until the contrary is proved. (This statement is based upon the examination of 6358 apparently healthy negroes of all ages and both sexes.) It is therefore proposed that good results may be expected from the serious application of quarantine measures directed against the advance of human trypanosomiasis and dependent for their efficiency upon cervical gland palpation.

The measures recommended are briefly: (1) the establishment of medical posts of inspection along the trade routes leading from infected to uninfected districts; and (2) the removal of infected persons from posts in uninfected districts to places already infected. If success is to be obtained the application of these measures must be thorough. The details of the way in which they are to be made effective cannot be considered here. They must be left to those who are to administer them. It may be suggested, however, that in most instances it will be impossible for the existing medical officers to enforce such measures in addition to performing their ordinary duties. The situation is quite serious enough to require the whole attention of special medical officers aided by competent staffs.

As an example of the applicability of the proposed measures consider the case of Nyassaland. It is certain (see Map 1) that the natives of the southern as well as of the northern shores of Lake Tanganyika will shortly be very heavily infected with trypanosomiasis. Labourers are engaged from the neighbourhood of Tanganyika to work in Nyassaland. There is constant communication between these two districts, since one of the most important caravan routes to Central Africa runs between Lake Nyassa and Lake Tanganyika. In my opinion, therefore, it is only a question of months before imported cases of the disease will be reported from Nyassaland. It is evident that the communication between these two areas should be stringently controlled. Posts of inspection should be established to prevent infected porters, in caravans, or labourers from entering British territory. Every employer of labour must be made to understand the danger of enlarged neck glands and should be instructed to send negroes possessing them to the nearest post of inspection. Each person residing or travelling in uninfected areas must be made personally responsible for the presence of persons with enlarged glands in his following. It is believed that the difficulties of applying these measures will not be as great as might be anticipated. Natives will soon learn and appreciate the danger of enlarged glands; they have long recognised their significance in Sierra Leone, Uganda, and in parts of the Congo Free State. It will admittedly be impossible altogether to control the movements of individuals, but it is not from single persons, as a rule travelling only a few miles, that danger is to be apprehended. It is the organised transport of groups of negroes which is dangerous.

It is concluded that: 1. The enormous spread and great increase of sleeping sickness in the Congo basin have been due in great measure to the increase in travel following the opening up of the country. 2. Cases of trypanosomiasis, though apparently healthy, may be detected by their enlarged glands. 3. We may expect to check the advance of the disease by the serious application of quarantine measures dependent for their efficiency upon cervical gland palpation.

Addendum.—Since this paper was written apparently trustworthy reports have appeared in the daily press asserting that sleeping sickness has already appeared among the *natives inhabiting* the western shores of Lake Moero. The disease is spreading rapidly towards British Central Africa. The need for action is immediate.

Runcorn.

A NOTE ON THE ACTION OF THE SERUM OF VARIOUS MAMMALS ON THE BACILLUS PESTIS.

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AND
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CAPTAIN, I.M.S.

THE etiology of plague offers the bacteriologist many interesting problems for solution. Of these problems one of great general interest is the immunity enjoyed by some members of the order of mammalia under natural and artificial conditions of infection.

The Indian Plague Commission found that rats, mice, squirrels (Indian variety), and monkeys were all susceptible to the disease under natural conditions of infection and that there was proof of epidemics having occurred in the case of all these animals. Of these animals it was stated that the grey monkey (Semnopithecus entellus) was more susceptible than the brown monkey (Macacus radiatus). The cat was also found to be susceptible under natural conditions of infection, the disease running a chronic course and taking the form of buboes in the neck accompanied by wasting. Dogs, jackals, and birds apparently did not contract the disease in nature.

The finding of the German Commission after laboratory investigation was as follows:—Rats and guinea-pigs are very susceptible; mice are a little less susceptible; monkeys are nearly as susceptible as rats, the grey monkey being the most susceptible; cats are less susceptible. Dogs, pigs, oxen, sheep, and goats sicken after large doses but soon recover. On the whole they are little susceptible. Birds, snakes, lizards, and frogs are insusceptible.

Simpson and Hunter[1] claim to have succeeded in producing the disease by feeding upon material containing bacillus pestis several species of domestic animals and birds (pigs, cattle, hens, turkeys, ducks, geese, and pigeons). Since the publication of Simpson's results Pitchford in Natal and Bannerman in Bombay have been totally unable to reproduce them. Captain G. Liston, I.M.S.,[2] has recently shown that the guinea-pig when placed under natural conditions of infection readily contracts the disease.

So far as we are aware, the only mammals in India which have been definitely proved to be capable of contracting the disease under natural conditions of infection are rats, mice, squirrels, guinea-pigs, cats, and monkeys. These facts, we think, point to the desirability of a careful investigation of the action of the body fluids and formed elements of different animals of the order of mammalia on bacillus pestis. Up to date but little work has been done on unimmunised animals, and until we are acquainted with the action of normal serum, &c., on bacillus pestis the immunity of the larger mammals will remain unexplained.

Wright and Windsor,[3] using methods of high precision, showed that normal human serum is devoid of bactericidal action on the bacillus pestis. The methods of these observers were as follows:—

1. Equal volumes of normal human serum and a graded series of dilutions of a broth culture of bacillus pestis were kept in contact for from 18 to 24 hours at 37° C. At the same time a parallel series was prepared consisting of equal volumes of sterile broth and the dilutions of the plague

[1] Simpson: A Treatise on Plague, p. 116, University Press, Cambridge.
[2] Indian Medical Gazette, February, 1905.
[3] Journal of Hygiene, Oct. 1st, 1902.

culture. After incubation for from 18 to 24 hours the mixture of serum or broth and plague culture was drawn into broth and the two series were compared after further incubation. No appreciable bactericidal power could be discovered by this method.

2. An ascending series of dilutions of a plague culture were made on the one hand with serum and on the other with broth. Measured quantities of a 100,000 fold dilution of the culture made with broth were at once planted out on the surface of agar and the colonies were subsequently enumerated. From the corresponding dilution of the culture made with serum the same quantities were removed and incubated at 37° C. for from 18 to 24 hours, after which these quantities were sown out on the surface of agar and the colonies enumerated. No evidence of bactericidal action could be obtained by this method.

3 Normal serum was saturated with a dense suspension of bacillus pestis, and the bactericidal power of the serum for cholera and typhoid fever was tested. It was found that bacillus pestis was incapable of exerting an anti-bactericidal action.

Our original intention was to estimate the bactericidal and opsonic action of the sera of domestic animals for bacillus pestis before and after immunisation, but the formation of a new Plague Commission and the appointment of one of us to the same have rendered the completion of our intention impossible. We have therefore decided to publish our results as far as we have gone for the benefit of those who may be working in the same field. With this introduction we may pass on to a statement of the technique employed and the results obtained.

TECHNIQUE.

1. *Collection and storage of serum.—(a) Goat, ox, dog, horse, and sheep.*—In the case of these animals the blood was drawn from the external jugular vein by means of a sterile hypodermic syringe and allowed to clot in a sterile conical vessel.

(b) Man and monkey.—The blood was collected and allowed to clot in Wright's capsules. The part from which the blood was taken was first sterilised by scrubbing with a saturated solution of perchloride of mercury which was afterwards washed off by successive applications of absolute alcohol, ether, and sterile distilled water.

(c) Rabbit.—One ear of the rabbit was shaved and then sterilised by successive applications of a saturated solution of perchloride of mercury, absolute alcohol, ether, and distilled water. The animal was then strapped on a hot-water bag and the lateral auricular vein was clipped with a pair of bull-dog forceps near the base of the ear. A longitudinal cut was made into the distended vein and the blood was allowed to drip into a sterile conical vessel. By this method it was found that 10 cubic centimetres of blood could be obtained with ease.

(d) Guinea-pig and rat.—The throat of the animal was first shaved, after which an anæsthetic was given and the skin was sterilised with the cautery. The carotid artery was then exposed with sterile instruments, divided, and the blood collected in a sterile conical glass vessel.

In all cases the serum used for experiment was 24 hours old in contact with clot. Sterility controls for the serum were always put up and only those experiments are recorded in which the serum proved sterile.

2. *Estimation of bactericidal action.*—For this purpose the following methods were employed:—

(a) Wright's capillary testing pipettes.—The procedure adopted was that described by Professor A. E. Wright.[4] Equal volumes of the test serum and an ascending series of dilutions of a 48 hours broth culture of bacillus pestis were brought together in the capillary stems of these pipettes. At the same time a parallel series of pipettes was prepared containing equal volumes of sterile broth and the ascending series of dilutions of the culture. All pipettes were then incubated at 37° C. for from 18 to 24 hours, after which the mixture of test serum or sterile broth and culture dilution was drawn up into the broth chamber. All pipettes were then incubated for three days at 37° C., after which the presence or absence of bactericidal action was determined by comparing the pipettes of both the broth and serum series. In cases of doubt as to the purity of the growth obtained the contents of the pipettes were blown on to agar and the resulting growth was subjected to the customary tests.

[4] Proceedings of the Royal Society, 1902, vol. lxxi., p. 54.

(b) By the use of small test tubes.—Equal quantities (50 cubic millimetres) of the test serum and an ascending series of dilutions of a 48 hours broth culture of bacillus pestis were brought together in small, specially constructed test tubes. These tubes were prepared from glass tubing, being blown and lipped in the ordinary way. The average length of the tubes was about 4·5 centimetres and the

Table showing the Results of the Action of the Serum of Various Mammals on the Bacillus Pestis.

(1) *Normal Human Serum.*

Dilutions of the 48 hours broth culture of bacillus pestis employed.	Capillary pipettes were filled in with		Test tubes were filled in with	
	One volume of culture dilution and one volume of serum.	One volume of culture dilution and one volume of sterile broth.	50 c.mm. of culture dilution and 50 c.mm. of serum.	50 c.mm. of culture dilution and 50 c.mm. of sterile broth.
2 fold dilution	Growth.	Growth.	—	—
5 ,, ,,	,,	,,	—	—
10 ,, ,,	,,	,,	—	—
25 ,, ,,	,,	,,	—	—
50 ,, ,,	,,	,,	—	—
100 ,, ,,	,,	,,	—	—
1,000 ,, ,,	,,	,,	—	—
10,000 ,, ,,	,,	,,	—	—
100,000 ,, ,,	,,	,,	—	—
1,000,000 ,, ,,	Sterile.	Sterile.	—	

(2) *Serum of Brown Monkey.*

2 fold dilution	Growth.	Growth.	—	—
5 ,, ,,	,,	,,	—	—
10 ,, ,,	,,	,,	—	—
25 ,, ,,	,,	,,	—	—
50 ,, ,,	,,	,,	—	—
100 ,, ,,	,,	,,	—	—
1000 ,, ,,	,,	,,	—	—
10,000 ,, ,,	,,	,,	—	—
100,000 ,, ,,	,,	Sterile.	—	—

(3) *Horse Serum.*

2 fold dilution	Growth.	Growth.	Growth.	Growth.
5 ,, ,,	,,	,,	,,	,,
10 ,, ,,	,,	,,	,,	,,
25 ,, ,,	,,	,,	,,	,,
50 ,, ,,	,,	,,	,,	,,
100 ,, ,,	,,	,,	,,	,,
1,000 ,, ,,	,,	,,	,,	,,
10,000 ,, ,,	,,	,,	,,	,,
100,000 ,, ,,	,,	,,	,,	,,
1,000,000 ,, ,,	Sterile.	Sterile.	,,	Sterile.

(4) *Ox Serum.*

2 fold dilution	Growth.	Growth.	Growth.	Growth.
5 ,, ,,	,,	,,	,,	,,
10 ,, ,,	,,	,,	,,	,,
25 ,, ,,	,,	,,	,,	,,
50 ,, ,,	,,	,,	,,	,,
100 ,, ,,	,,	,,	,,	,,
1,000 ,, ,,	,,	,,	,,	,,
10,000 ,, ,,	Sterile.	,,	,,	,,
100,000 ,, ,,	Growth.	Sterile.	Sterile.	,,

(5) *Sheep Serum.*

2 fold dilution	Growth.	Growth.	Growth.	Growth.
5 ,, ,,	,,	,,	,,	,,
10 ,, ,,	,,	,,	,,	,,
25 ,, ,,	,,	,,	,,	,,
50 ,, ,,	,,	,,	,,	,,
100 ,, ,,	,,	,,	,,	,,
1,000 ,, ,,	,,	,,	,,	,,
10,000 ,, ,,	,,	,,	,,	,,
100,000 ,, ,,	Sterile.	,,	,,	,,
1,000,000 ,, ,,	,,	Sterile.	Sterile.	Sterile.

Table showing the Results of the Action of the Serum of Various Mammals on the Bacillus Pestis (Continued).

(6) *Dog Serum.*

Dilutions of the 48 hours broth culture of bacillus pestis employed.	Capillary pipettes were filled in with: One volume of culture dilution and one volume of serum.	Capillary pipettes were filled in with: One volume of culture dilution and one volume of sterile broth.	Test tubes were filled in with: 50 c.mm. of culture dilution and 50 c.mm. of serum.	Test tubes were filled in with: 50 c.mm. of culture dilution and 50 c.mm. of sterile broth.
2 fold dilution.	Growth.	Growth.	Growth.	Growth.
5 " "	"	"	"	"
10 " "	"	"	"	"
25 " "	"	"	"	"
50 " "	"	"	"	"
100 " "	"	"	"	"
1,000 " "	"	"	"	"
10,000 " "	"	"	"	"
100,000 " "	"	"	"	"
1,000,000 " "	Sterile.	Sterile.	"	Sterile.

(7) *Goat Serum.*

2 fold dilution	Growth.	Growth.	Growth.	Growth.
5 " "	"	"	"	"
10 " "	"	"	"	"
25 " "	"	"	"	"
50 " "	"	"	"	"
100 " "	"	"	"	"
1,000 " "	"	"	"	"
10,000 " "	Sterile.	"	"	"
100,000 " "	"	"	"	"
1,000,000 " "	"	Sterile.	Sterile.	Sterile.

(8) *Rabbit Serum.*

2 fold dilution	Growth.	Growth.	Growth.	Growth.
5 " "	"	"	"	"
10 " "	"	"	"	"
25 " "	"	"	"	"
50 " "	"	"	"	"
100 " "	"	"	"	"
1,000 " "	"	"	"	"
10,000 " "	"	"	"	"
100,000 " "	"	"	"	"
1,000,000 " "	Sterile.	Sterile.	"	Sterile.

(9) *Guinea-pig Serum.*

2 fold dilution	Growth.	Growth.	Growth.	Growth.
5 " "	"	"	"	"
10 " "	"	"	"	"
25 " "	"	"	"	"
50 " "	"	"	"	"
100 " "	"	"	"	"
1,000 " "	"	"	"	"
10,000 " "	"	"	"	"
100,000 " "	"	"	"	"
1,000,000 " "	"	Sterile.	"	Sterile.
10,000,000 " "	Sterile.	"	"	"

(10) *Rat Serum.*

2 fold dilution	Growth.	Growth.	Growth.	Growth.
5 " "	"	"	"	"
10 " "	"	"	"	"
25 " "	"	"	"	"
50 " "	"	"	"	"
100 " "	"	"	"	"
1,000 " "	"	"	"	"
10,000 " "	"	"	"	"
100,000 " "	"	"	"	Sterile.
1,000,000 " "	"	Sterile.	"	Growth.
10,000,000 " "	"	"	"	"

capacity was about one cubic centimetre. At the same time a parallel series of tubes was prepared, each tube containing equal quantities (50 cubic millimetres) of sterile broth and the ascending series of dilutions of the broth culture. All tubes were then incubated at 37° C. for from 18 to 24 hours, after which 0·5 cubic centimetre of sterile broth was added to each tube, beginning in the case of each series at that tube which contained the highest dilution of the culture. All tubes were then incubated at 37° C. for three days, after which the presence or absence of bactericidal action was determined by comparing the tubes of the serum and broth series. In cases of doubt the purity of the resulting growth was ascertained by the usual methods. The strain of bacillus pestis employed was isolated from an acute case of bubonic plague. The dilutions of the culture were made in sterile watch glasses with sterile broth by means of Wright's diluting pipette. Enumeration of the culture was made from a 1,000,000 fold dilution, but owing to the nature of the growth of bacillus pestis in culture media the results were not very satisfactory. When the quantity of serum available was sufficiently great both methods of estimating bactericidal power were used simultaneously, but when, as in the case of man and monkey, only a small quantity of serum was available Wright's method alone was used.

Inspection of the accompanying table shows that in no case was any evidence of bactericidal power discovered. On the contrary, it was found that the serum of all the animals examined proved to be as good a medium for the growth of bacillus pestis as ordinary nutrient broth. Four observations were made with the serum of each animal but as the result in all cases was consistently negative, so far as bactericidal action was concerned, only one experiment is recorded for each animal. From these experiments it would seem that normal mammalian serum is devoid of any batericidal action on bacillus pestis. The explanation of the immunity enjoyed under natural and artificial conditions of infection by some members of the order of mammalia must be sought in some other direction.

Bombay.

THE OLD AND THE NEW IN OCULAR THERAPEUTICS.[1]

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IN the treatment of disease fashion undoubtedly influences the practitioner far more than he imagines. There is a tacit trust in authority, and certain things are done in certain circumstances without much consideration as to the why or the wherefore. While pathological research and physiological inquiry have accomplished much in placing the treatment of disease upon a more scientific basis and in making it more intelligent, more rational, and less and less of an experiment, yet the only true test of scientific generalisation is clinical experience. Practice is the touchstone of the validity of science, and while science has revolutionised many branches of medical work, and is certain to suggest still more and more new methods, it does not follow as a matter of absolute law that in every, or indeed in any, case the result will be what might have been anticipated from laboratory experiment. The ultimate aim of all practice is the cure or relief of the patient, and anything that will produce either result is worthy of attention and trial, even though it may not be in accordance with all that is yet known of scientific method. Therapeutics, therefore, though it aims at being a science, is still largely empirical, but being in reality an art it is none the less useful because it is empirical. Success in the art of healing is thus largely a matter of the physician's personal experience, and the great aim ought always to be to utilise experience to formulate a principle and so to permit the succeeding generation to appropriate the information laboriously accumulated by those who have gone before.

The great difficulty, however, is to analyse the experience

[1] A post-graduate lecture delivered at the Glasgow Ophthalmic Institution on Dec. 5th, 1905.

gained after a life long devotion to medical practice so that others may benefit from it. The old medical practitioner knows the right thing to do, and does it; but he often fails to communicate to another the exact reason of his action. His skill in the treatment of disease has about it just the touch of genius that distinguishes it from mere talent. It is personal and, unfortunately, for the most part dies with him. Others may copy his methods but the result obtained is usually very different, because, as the late Dr. John Brown says, "no man can explain directly to another man how he does any one particular thing, the doing of which he himself has accomplished not at once, or by imitation, or by teaching, but by repeated personal trials—by missing much before ultimately hitting." The young graduate, fresh from the university and full of the most recent theories as to the cause of disease and the action of remedies, smiles in a superior way as he speaks of the old-fashioned practitioner, whom, nevertheless, he is only too glad to see at his bedside when he himself is ill. Wherein, then, does the strength of the older man lie? It lies in this, that he treats his patient rather than the disease, recognising that he has a certain diathesis, a family history, hereditary proclivities, and the personal peculiarities which are termed idiosyncrasies. As it is popularly expressed, he knows his patient's constitution and he is also in most instances cognisant of his habits, consequently it is with recognised authority that at one time he whispers words of hope and encouragement and at another utters a timely and serious warning. The beginning and the end of his practice, therefore, is treatment, which is just what the medical student of to-day often tends to neglect; and by treatment I do not mean simply the administration of drugs but the making use of every agency or circumstance which can help to bring about the patient's recovery.

The weakness of the older men lay in their idea that disease was a morbid entity that had to be driven out of the system at all hazards and so their treatment was often inclined to be too heroic. They bled, they leeched, they blistered, they purged, they salivated all to extremes, and hence they brought upon themselves the ridicule of many a satirist. In his novel "Hard Cash" Charles Reade, for example, makes Dr. Sampson rail vigorously against antiphlogistic methods and at an earlier period Molière wrote that "only strong and robust constitutions can bear their remedies in addition to the illness; the patient has only just enough strength for his sickness." While it is true that these methods were in many instances carried to excess and the ridicule richly deserved, we must remember that there is for all of them when properly employed a sphere of great usefulness. In no branch of medicine is this more obvious than in the treatment of ocular diseases, where in many cases leeching, blistering, and purging are employed with advantage and success. For example, in a case of severe irido-cyclitis if blood be taken freely from the temple by either the natural or the artificial leech, in most cases a change for the better at once takes place, pain is relieved, the pupil dilates, and congestion diminishes. Again, in a case of keratitis most gratifying results are often obtained by following the old-fashioned plan of blistering the eyelids with solid caustic; and in iritis, when the disease is tending to relapse time after time, the application of a blister often brings about such a change that recovery goes on afterwards without interruption. A more pronounced result still is obtained if the blistered surface be kept open by the application of an irritating ointment or by D'Albespeyre's paper and in all deep seated chronic inflammations an open blister largely contributes to the means of cure. When the inflammation is due to syphilis the presence of an open sore is, in my experience, most helpful, and therefore in such instances I have not the slightest hesitation in inserting a seton in the nape and keeping it there for several months. So strongly, indeed, am I convinced of the value of such measures that I feel that those who do not freely avail themselves of them deprive their patients of an important source of help. Then again, how great is the improvement that often comes to an injured or inflamed eye after free purgation by a large dose of calomel followed by a saline draught; and it has been demonstrated over and over again in iritis that the inflammation yields and the pupil dilates to atropine simultaneously with the slight soreness of the gums which indicates that the system is becoming affected by mercury. Oculists have never abandoned calomel and opium in the treatment of diseases of the uveal tract, no matter whether they be of syphilitic origin or not.

In ophthalmology I think I may fairly say that the great contrast between the old and the new lies in the fact that, while the old masters made a great point of general treatment, the modern ophthalmic surgeon tends too much to look upon ocular therapeutics as mainly local and operative. The tendency is, in my opinion, a mistake, for I think it as important as ever always to lay down and to carry out a definite plan of general treatment which will deal not only with the eye but with the patient's whole condition. The want of familiarity with prescribing and the consequent tendency to take refuge in the use of proprietary drugs are often very unfortunate. A remedy which has been successful in one case may in another interfere with the digestion and assimilation of food and so do nothing but harm. Whenever a medical man finds any medicine, no matter how high its reputation, causing gastro-intestinal disturbance he should at once vary the preparation and the combination of drugs to suit the peculiarity of the patient, and he will be the most successful who can do this and at the same time not depart in the least from the line of treatment he has laid down for himself.

Great, however, as was the clinical skill of the old masters, and much as we may learn from them, there can be no doubt whatever that the advance of science and the increase of knowledge have thrown an entirely new light on the treatment of eye diseases. Let us look at some of the branches of the subject where this is specially true.

1. *Refraction.*—Up to the time of Donders there was no exact knowledge of the optical defects of the eye. All that could be said was that concave glasses improved myopia, convex ones presbyopia, and the selection of a lens for the one or for the other in any given case was simply a process of rough empiricism. It is true that the symptoms consequent upon errors of refraction were known to the old ophthalmologists, for in their writings they have, under the name of asthenopia, described this condition at great length, and in the realistic clinical pictures they have given there cannot be the slightest difficulty in recognising all the symptoms of eye-strain. They possessed, however, only a very hazy notion of the real cause of the difficulty. Mackenzie came very near the truth when he wrote that "one of the strongest proofs that the seat of the disease must be, in part at least, the apparatus of accommodation is the fact that the employment of glasses relieves the symptoms almost as completely as it does those of presbyopia," but in his classical treatise he has much to say upon other causes, which he divides into remote and proximate. Of the latter he writes that "as pathological anatomy has thrown no light on the seat or nature of asthenopia we are left altogether to conjecture respecting its proximate causes." He regarded the condition as "an infirmity much more to be dreaded than many disorders of the eye which, to superficial observation, present a far more formidable appearance." He looked upon the prognosis as "on the whole unfavourable" and gave it as his opinion that "in many cases it is our duty to declare the disease incurable, and to explain to the patient and his friends that all that can be done for it is, as much as possible, to spare the sight from exercise on near objects. If the patient is a young lad bound apprentice to a sedentary trade, and the disease, from its duration and its mode of origin, not likely to yield to treatment, we may advise him to turn shopkeeper, to apply himself to country work, or to go to sea: if a female occupied constantly in sewing, to engage in household affairs, or any other healthy active employment. Many a poor man have I told to give up his sedentary trade and drive a horse and cart; while to those in better circumstances, and not far advanced in life, I have recommended emigration, telling them that, though they never could employ their eyes advantageously where much reading or writing was required, they might see sufficiently to follow the pastoral pursuits of an Australian colonist."

These words were published in 1854, only ten years before Donders gave to the world his great work on the "Anomalies of the Refraction and Accommodation of the Eye," in which he demonstrated for the first time what is meant by ocular refraction and accommodation, what changes they undergo with age, how they are related to the movements of the eye, and how they may be neutralised or corrected. Had it not been for Donders the brilliant discoveries of Helmholtz, which went far to solve the much-disputed question of the accommodation of the eye to different distances, might not even yet have been utilised

for the good of mankind, notwithstanding that they are in our daily life of the utmost importance for persons of every age and of every class and have value that will persist for all time. Few discoveries, indeed, have been more beneficial in their results, for no one can estimate the number of those who in former days would have been compelled through visual disability to abandon their "position, their prospects, and their duties in life," but who through the prescription of suitable spectacles have been restored to health, to happiness, and to usefulness.

In dealing, however, with those who complain of symptoms of eye-strain, it ought always to be remembered that the prescription of glasses, although essential and all important, must not be regarded as the whole treatment. It is not enough in the case of the young simply to adjust lenses suitable for the correction of the error of refraction. A quick estimate must also be formed of the patient's general strength, for it must not be forgotten that, although the demand for work made upon the ciliary and the extra-ocular muscles may not be unreasonably great in itself, yet it may be altogether excessive in relation to the individual in whom it is made. While, therefore, the error of refraction ought always to be carefully corrected so that the eye may be used under the most favourable conditions, every effort must also be made to develop and to strengthen the whole muscular system.

The amount of attention which has, through the examination of the eyesight of school children and otherwise, been of late directed to this subject has unfortunately given rise to a serious evil. The number of people who now find that they require spectacles has called into existence a class of opticians who style themselves "Refractionists" or "Optologists," and who try to promulgate the idea that as "spectacles concern the optical part of the eye only" they are perfectly competent to prescribe as well as to sell glasses. A too credulous public have readily availed themselves of the services of these men under the impression that they are obtaining all the benefit that could be got from a specialist without having to pay his fee. The eye is the most delicate organ in the body and its diseases are at times so subtle that their existence and nature require the most skilled examination and attention, consequently it is not difficult to imagine the amount of harm that may follow the counter prescribing of the ophthalmic optician. I am perfectly well aware that some medical men are in the habit of referring their patients to such advisers, but why they should delegate an important part of their duty to an unqualified person it is very difficult to understand. The eye is not only in the body but it is also of the body, and the treatment of its optical defects requires the physician's skill just as much as does the treatment of its diseases. Opticians would confer a far greater benefit on the public if they would utilise their increased knowledge to perfect the mechanical parts of spectacles and eye-glasses, and leave the prescribing to those who are, by their medical knowledge and special training, fitted to do the work efficiently.

2. *Mydriatics.*—These, owing to the use of the ophthalmoscope and the study of refraction by the shadow test, are nowadays much more generally employed than was once the case. One of the commonest of them is atropine, which has for long occupied such a high place in ocular therapeutics that the uninstructed have come to look upon it as a panacea for all the ills that the eye is heir to, and consequently the abuse of the drug has done much harm. In simple conditions, where its administration was unnecessary, much inconvenience has been caused by paralysis of the accommodation, while in the elderly its use has at times precipitated an attack of acute glaucoma. It ought to be a golden rule, never to be forgotten by anyone who treats diseases of the eye, that atropine should in no case be instilled in a patient over 40 years of age until the intra-ocular tension has been carefully tested and found to be normal. The caution that atropine ought never to be used in glaucoma cannot be repeated too often. For examination purposes its disadvantages are obvious. It not only dilates the pupil but it paralyses the accommodation, and its effects remain for several days greatly to the inconvenience of the patient. Indeed, should he be suffering from an affection of the retina or choroid and there be any increase of the disease during the time the eyes are under the influence of the drug, he may easily be tempted to blame the atropine used to facilitate an ophthalmoscopic examination for making his sight worse. A demand has therefore arisen for a mydriatic which will act quickly and the effects of which will pass off quickly, and which, while it will dilate the pupil to the maximum, will interfere as little as possible with accommodation. The manufacturing chemist has supplied several, of which the most important is the very expensive homatropine. This is both a mydriatic and a cycloplegic, but its effects pass off in a few hours. It is employed in a 1 per cent. solution and is, in combination with cocaine, much used in the estimation of refraction by the shadow test. Other two excellent preparations are mydrine and euphthalmine, which dilate the pupil quickly and interfere but little with accommodation. They are of great value for improving sight in nuclear cataract or in central opacity of the cornea, as well as when one is making an ophthalmoscopic examination.

3. *Antiseptics.*—Long before anything was known of bacteriology the three favourite drugs employed in the treatment of inflammation of the conjunctiva were nitrate of silver, sulphate of zinc, and perchloride of mercury. All three have powerful antiseptic action and that property explains the favour in which they were held by the older ophthalmic surgeons, who, however, reached their conclusions wholly as a result of extensive clinical observation. It was known that nitrate of silver was of special value in purulent ophthalmia, that sulphate of zinc was almost a specific in certain forms of catarrhal conjunctivitis, and that perchloride of mercury was generally useful in inflammation both of the lids and of the conjunctiva. A study of bacteriology affords a ready explanation, for it has been proved that salts of silver are fatal to gonococci, that sulphate of zinc is fatal to the bacillus of Weeks, and that perchloride of mercury is inimical to all forms of microbic life. This is a good example of how a method of treatment arrived at in the first instance by clinical experiment has been amply justified and confirmed by the increase of knowledge. The old ophthalmic surgeons are entitled to the credit of having been the pioneers in the use of antiseptics, though they could not explain how or why the beneficial results came about, while the general surgeon did not fully avail himself of these germicides till their action was explained by the study of bacteriology.

Ophthalmology received advantage in turn from the investigation and discussion of the germ theory. The researches of Pasteur and their practical application by Lister and his followers made successful operative interference possible in many cases from which the surgeon had hitherto been debarred, and so gave a great stimulus to surgery of every kind. In the case of that of the eye, however, there was a difficulty in carrying out full antiseptic methods; owing to the extreme delicacy of the structures it is not possible to employ antiseptic solutions strong enough to kill the micro-organisms without at the same time injuring the conjunctiva. In ocular surgery, therefore, the field of operation is prepared by freely flushing the conjunctival sac with bland solutions. By that means the germs are mechanically washed away and their numbers are consequently so reduced that they are unable to exercise any injurious influence over the healing of a wound. If infection has taken place, however, an antiseptic is necessary, and of all those employed in ocular surgery none is so generally useful as silver. In the old form of the nitrate it has no doubt many disadvantages. Its caustic action gives rise to a superficial eschar and thus it cannot penetrate deeply into the tissues. Its use is accompanied by great pain and after a time it produces dark staining of the conjunctiva —argyrosis. In spite of these drawbacks, however, the nitrate can still in many cases be employed with advantage, although it is now being in great measure supplanted by other salts of the same metal which, while they are strongly bactericidal, possess fewer undesirable qualities. Out of the large number of these which the manufacturing chemist has placed on the market I shall select the three with the clinical value of which I am most familiar—protargol, collargol, and argyrol. Although the first contains only 8·3 per cent. of metallic silver, as contrasted with 30 per cent. in each of the others, it is by far the most irritating as well as the one most liable to cause argyrosis. Each, however, has come to occupy a distinct place in my practice. In chronic inflammation of the conjunctiva and the edges of the eyelids protargol, in from 10 to 25 per cent. solution or ointment, brushed vigorously over the affected parts, produces far quicker and better results than are to be obtained by any other method of treatment with which I am acquainted. In recent wounds of the eyeball I prefer collargol and employ it for the most part in

the form of gelatine wafers containing 10 per cent. of the drug, but I also use it in solution and as ointment in strength varying from 5 to 20 per cent. If the injured surface be aseptic the collargol gelatin at once adheres to it, thereby sealing the wound and covering it up completely with an antiseptic plaster under which healing goes on with great rapidity. If, however, there be any sepsis the silver salt will not adhere to the wound, and consequently the presence or absence of the staining forms a trustworthy guide in prognosis. Collargol is almost always successful in its action and it has also a wonderful power in clearing up recent opacities of the cornea, whether these be due to injury or to disease, but on very rare occasions it induces so much chemosis and causes such severe pain that its use requires to be discontinued. In acute conjunctivitis argyrol gives the best results. Of the three it is the least irritating and it possesses quite a wonderful power in lessening discharge and in relieving pain. It can be used in as great a strength as 50 per cent. and, like the other preparations I am speaking of, it may be applied either in solution or as an ointment. Although it is said to penetrate deeply into the tissues, on only two occasions have I seen marked discolouration of the conjunctiva follow its use. It is so non-irritating that it can safely be injected into the anterior chamber to control intraocular suppuration and in this connexion I have obtained better results from it and from collargol gelatin than from the iodoform rods so highly recommended by Haab. In the treatment of purulent ophthalmia, either in the adult or in the new-born child, it is, in my opinion, the most valuable remedy that we possess; but the best results are obtained by brushing the whole palpebral conjunctiva once thoroughly with a 2 per cent. solution of nitrate of silver at the outset of the disease and afterwards applying a 20 per cent. solution of argyrol every few hours, the frequency of these applications being regulated solely by the amount of the discharge. In blennorrhœa of the lacrymal passages, after the nasal duct is clear of obstruction, the injection of solution of argyrol into the tear-sac checks suppuration and thereby hastens the cure of what in former days was one of the most tedious of diseases.

The great aim of modern surgery being to prevent, or to control, sepsis, a very large number of drugs for this purpose have in recent years been put on the market by manufacturing chemists, accompanied by numerous testimonials in praise of their highly antiseptic properties. I need only remark concerning most of these that the results obtained in a test-tube experiment are not always confirmed in actual practice. Two, however, can be confidently recommended—chinosol and trikresol. The former in the strength of 1 in 4000 is of undoubted value in the treatment of infected ulcers of the cornea, and the latter, 1 in 1000, forms an admirable lotion for removing discharge from an inflamed conjunctiva.

There is one form of ulceration of the cornea—serpiginous ulcer—which, when it does show itself, follows as a rule some trivial injury, but the truly infective nature of which is made manifest by its exceeding painfulness and by the rapid appearance of pus in the anterior chamber. It takes its name from the stealthy and yet steady way in which, if uncontrolled by treatment, it creeps over the whole surface of the cornea and destroys it completely. I well remember with what grave apprehension this disease used to be regarded, and how the surgeon, having exhausted all the known resources of therapeutics, had to stand by and watch the cornea melt away. Nowadays all that is changed, for by the thorough and timely application of the actual cautery the process of ulceration can be arrested, and, if care be taken to prevent reinfection, and if the tendency to the formation of anterior staphyloma be obviated by keeping the patient in bed till cicatrisation is complete, useful vision can in many instances be restored. Indeed, in the treatment of serpiginous ulcer, once so formidable and so intractable, modern ophthalmology has achieved one of its greatest triumphs.

For the purpose of controlling and arresting infection some have in recent years advocated the injection of weak solutions of mercurial salts beneath the conjunctiva, on the ground that the nearer to the site of the disease the remedy is applied the more likely it is to prove effective. My own experience of this method in the treatment of suppurative keratitis or of infective irido-cyclitis does not warrant me in speaking strongly in its favour; but in some diseases—in choroiditis, for example, accompanying high myopia, and in detachment of the retina—where the usual remedies have but little effect, I have obtained very encouraging results from the use of subconjunctival injections. The fluid which I usually employ is 8 per cent. chloride of sodium in a 1 in 2000 solution of bicyanide of mercury, 5 to 20 minims being injected slowly beneath the conjunctiva, which as the fluid enters rises in a bleb. The great drawback to this method of treatment is its exceeding painfulness, but the suffering can be largely mitigated by using only chemically pure chloride of sodium and by adding to each dose immediately before injection a few drops of a 1 per cent. solution of acoine.

4. *Anæsthetics.*—These are "remedies by means of which the sensations of pain are dulled or abolished." They are divided into two classes—local and general.

(*a*) *Local anæsthetics.*—Of these, cocaine is in my opinion *facile princeps*. It was introduced by Koller in 1884 and its use has been an inestimable boon to ocular surgery. If any one has had a foreign body removed from his cornea without cocaine and has had, also, at a later period, the same operation performed with the eye anæsthetised by means of that drug, he will realise to the full the difference in this respect between the old and the new. The use of cocaine has, however, certain drawbacks. It dilates the pupil, disorders the accommodation, and acts injuriously upon the corneal epithelium, producing in some cases actual inflammation. Now, in my opinion, these disadvantages may for the most part be avoided if the solution employed be weak. I never for any purpose use a greater strength than 2 per cent., and I always make the patient keep the eye closed after the drops have been instilled. If the operation be prolonged I take the additional precaution of instilling a few drops of 5 per cent. chloretine oil into the conjunctival sac immediately before applying the bandage. In the case of a tarsal cyst, or in cauterising an ulcer of the cornea, however, I apply a small quantity of solid cocaine directly to the part about to be operated upon. When the drug is used in that way it seems never to be followed by any evil effect. If it be necessary to reach the deeper parts of the eye, for example the iris, a few drops of the 2 per cent. solution may be injected beneath the conjunctiva.

The drawbacks that I have mentioned have, however, led some to discard cocaine for holocaine, which in a 1 per cent. solution is a very trustworthy anæsthetic, though as it possesses highly toxic properties it cannot without danger be injected beneath the skin or conjunctiva or along the tear passages. In my experience holocaine acts more slowly than cocaine but penetrates more deeply, and I find it a most valuable addition to that drug in all operations in which it is necessary to cut the iris. My favourite combination for this purpose is cocaine hydrochloride 2 per cent. and holocaine hydrochloride 1 per cent. dissolved in solution of adrenalin chloride, 1 in 1000, freshly prepared immediately before being used. The employment of this mixture enables an operation for cataract to be performed without the slightest pain. Sometimes an oily solution is preferable to an aqueous one but in that case the pure alkaloid must be used and not a salt.

I have just just mentioned adrenalin, which is one of the most important of the additions that have been made in recent years to the resources of ophthalmic therapeutics. Its marvellous power of contracting blood-vessels enables the surgeon to carry out most operations on the eyeball almost bloodlessly, while the exsanguine condition of the conjunctiva which it produces facilitates the absorption of such drugs as cocaine, atropine, and eserine, and so renders their action more powerful. Stovaine, eucaine lactate, alypin, and acoine, of which the last has already been mentioned in connexion with the use of subconjunctival injections, are all trustworthy local anæsthetics and are much less toxic than cocaine but I do not think their virtues so outstanding as to make me prefer them in ordinary work to that drug used in the way I have described. Occasionally they may prove of considerable service, but up till now I have seen no reason to discard an old friend for the sake of the new preparations continually being introduced by chemists.

(*b*) *General anæsthetics.*—In ophthalmic surgery the use of local anæsthetics has to a large extent removed the need for general anæsthesia, but when one is dealing with a young child or with a nervous, refractory adult, or operating on an inflamed eye or enucleating the globe, a general anæsthetic is still necessary. In these circumstances I prefer chloroform but the patients must be brought thoroughly under its influence, for if they are only partially anæsthetised there is

a risk of vomiting or of awkward movements of the eye at a critical point of the operation, and in enucleation of the eyeball there is also the risk of dangerous collapse at the moment the optic and ciliary nerves are divided. For short operations where a general anæsthetic is deemed advisable I prefer to employ chloride of ethyl preceded by nitrous oxide gas. The use of this combination produces a profound quiet anæsthesia lasting from one to two minutes. The chloride of ethyl is, however, most suitable for women and children, for occasionally it causes men to become greatly excited before they pass thoroughly under its influence.

5. *Analgesics.*—These are "remedies which relieve pain," and they are, like anæsthetics, local and general. Of the former I shall mention only dionine. It is a derivative of morphine, and in 5 per cent. solution is one of the most valuable agents which we possess for the relief of deep-seated pain—e.g., in glaucoma, iritis, sclerotitis, &c. When dropped into the eye it causes at first a smarting and burning sensation accompanied by chemosis of the conjunctiva and swelling of the lids. These symptoms are sometimes very pronounced and may alarm the patient greatly if he has not been forewarned of the probability of their occurrence and told that they speedily pass off. This lymphagogue property of dionine is intimately associated with its power as an analgesic, because only after a good reaction is there much relief of the pain. This property also explains its power in promoting absorption of inflammatory deposits in the cornea. Its action in this way, very satisfactory in itself, is greatly increased if it be used along with collargol. In my experience the best results are obtained when a 5 per cent. solution of dionine is instilled in the morning and a disc of 10 per cent. collargol gelatin is placed in the conjunctival sac in the evening. I am satisfied that this method of treatment hastens the clearing of the cornea after an attack of ulceration or of interstitial keratitis.

Of general analgesics morphine injected subcutaneously is the most satisfactory but the physician ought to administer the dose himself and not intrust the use of the hypodermic syringe to a nurse. Unless the circumstances are very exceptional the best results are got from small doses—from one-eighth to one-sixth of a grain—repeated if necessary, and if the amount given be thus restricted it is seldom that there is any subsequent sickness and digestive disturbance If I think there is likely to be much suffering after an operation I give a small hypodermic injection of morphine before the patient is removed from the table. This insures several hours of continuous repose and so not only prevents the harm that arises from restlessness but also gives nature a healing chance of which she is never slow to avail herself to the utmost. Of the many newer pain-killing drugs supplied by manufacturing chemists one of the best in ophthalmic practice is aspirin. Given in 15-grain doses in iridocyclitis and other deep-seated inflammations of the eye, whether they be of rheumatic origin or not, it acts like a charm. Should it tend to cause depression it is wise to combine it with caffeine, and when the patient is sleepless its efficacy is greatly enhanced by the addition of ten grains of trional.

6. *Serum-therapy.*—No lecture, however fragmentary, can be considered as dealing with the new if it does not make mention of serum therapeutics. This, indeed, though it is typical of the trend of recent investigation, is in reality as old as nature herself, for we now know that it is her own method of curing disease. The normal blood serum contains protective substances which prevent noxious micro-organisms from doing harm, and infection can take place only when bacteria are present in greater numbers than the natural antitoxins can overcome. The study of the subject is as yet in its infancy, but the researches of Wright and others have demonstrated "that there exists in the normal serum, and there exists in larger quantity in the serum of the successfully inoculated patient, an element which enters into chemical combination with the micro-organism in such a manner as to prepare it for phagocytosis." As this substance can be measured, the use of artificial serums is placed upon a truly scientific basis and we can now employ them in perfectly determinate doses with exactitude and confidence. Hitherto the drawback in prescribing these powerful remedies was the risk of doing harm, but there is no reason to doubt that with the advance of science and the increase of knowledge serum treatment will come to bulk more and more largely in medical practice. Here we have the exact knowledge of the new dealing with a problem that the old tried to solve in a blindly empirical way. The humoralists argued that every morbid process arose from a disordered state of the blood and so they strove to restore this to a healthy condition. In modern times the discovery of micro-organisms led to the idea that they were the sole factors in causing disease and the tendency was to attempt to destroy the bacteria by antiseptics. Both efforts resulted in failure, for in the first case all attention was given to the soil and in the second to the germ. Now, however, that the relations of these have been brought into proper perspective, we know that the microbes can be fought successfully only by immunising the blood. When we remember how many eye conditions are simply the outcome of morbid constitutional states we can readily see how useful serum treatment may become in ocular therapeutics.

I know that in this lecture I have merely touched the fringe of a wide subject, but this is only a *résumé* of my own practice at the present moment and not a review of recent advances in ocular therapeutics. Those who wish for fuller information I must refer to Darier's papers and to the admirable lectures by Sydney Stephenson in the numbers of the *Medical Press and Circular* for August, 1905; of the great advances which have been made in electro therapeutics in the application of the x rays and other forms of radio-activity in the treatment of ocular affections, there is now no time to speak. The possibilities that underlie the action of the far-reaching ray world outside the narrow limits of the visible spectrum are so great as to transcend the bounds of even the most powerful imagination; but, without doubt, these therapeutic measures are full of promise and when we think of them we are filled with expectancy and hope. As yet, however, the results obtained are not such as to justify dogmatic statements, and at present it can only bring discredit on ourselves and on our methods to make such an assertion as that under the influence of ultra-violet or any other rays "cancers are cured." Nature, nevertheless, knows no pause and there can be no finality in knowledge. The old and the new must always be in contact and yet always in contrast. Progress implies a steady advance, and so on our onward course we must leave much behind. The great point is that from what we abandon we should always pick out and take with us whatever is good and true. Only then can we form a sure foundation on which to rear the superstructure of the new, and as we rear we must make certain not only that our foundations are firm but that each course in our building is secure. Nothing can be taken on trust. Not till a thing has stood the test of experience can we be certain that we have in it obtained what is reliable. To go sure we must go slow and never be led astray by the will-o-the-wisp glamour of novelty for novelty's sake. This will lead inevitably to mere floundering in the bog of charlatanism. Let us, therefore, prove all things and hold fast to that which is good, whether it be in the old or in the new.

Glasgow.

MEDICAL ATTENDANCE ON THE WORKING CLASSES.[1]

BY J. H. KEAY, M.A., M.D. EDIN.

THIS is an age of social problems. They are being constantly discussed not only in the press but by the man in the street. Everyone seems to be trying to solve such vexed questions as tariff reform, the unemployed, and the depopulation of the rural districts. Of scarcely less importance is the problem we have met here to discuss to-night—viz., Medical Attendance on the Working Classes. It is a trite saying but a true one that the working man is the backbone of the country and as it depends on the physique and *morale* of the working classes whether the country stands or falls no consideration that affects their standard of health and wage-earning capacity can be otherwise regarded than as of the utmost importance. It is quite true, however, that this problem does not bulk so largely in men's minds as those we have just mentioned. There are many medical men who have not regarded it seriously and the consequence has been that the problem of medical attendance on the working classes has been left very much

[1] A paper read before the West Kent Medico-Chirurgical Society on April 6th, 1906.

in the hands of the laity, while the attempts of the laity to solve it have generally ended in some form of unreasoning and misguided charity that has done as much to demoralise as to help the suffering poor.

Notwithstanding the increased standard of comfort in these days there is no denying it that in sickness the position of the more poorly paid of the working classes in this country is often painful in the extreme. We find from the Registrar-General's reports that in some parts of Scotland not more than half of those who die have been attended by a medical man. When in practice some years ago in Scotland my nearest medical neighbour to the north was distant 38 miles. In the intervening district were shepherds and farm labourers who were often poorly paid and when a long medical attendance was required the income of three or six months in the year would barely suffice to pay the ordinary fees of a medical man. As in these outlying districts the working classes though poor are generally honest and detest applying to the parish or being beholden to charity, it was sometimes my painful experience when six or eight miles on my way to see a patient to be met by a messenger who would tell me I need not go farther, that they had put off as long as they could, and that the patient was dead. I need not speak of the poorer districts of Ireland where a recent Commission has shown that medical men who have toiled hard for a livelihood have often ended their days in the utmost poverty. What advantage the sick are to derive from medical men who are themselves broken down through old age or overwork and suffering from chronic financial worry I know not.

It is not, however, to the provinces or outlying districts I ask your attention to-night but to the million and a half or more in London who are not earning a living wage and who certainly are not in a position to pay a doctor's bill. Now in trying to solve this problem there are two principles I would lay down which I trust will not meet with much opposition: (1) that if any conclusion is to be arrived at as to the best means of attending the labouring class it must be by those best acquainted with the subject—namely, by medical men themselves; and (2) that if we wish the public to be guided by any conclusion we arrive at we must first convince them that we have not considered the question from a merely narrow-minded or selfish point of view. It seems quite time that we had made up our minds whether we desire the public to regard us as a trade or a profession. If, on the one hand, our main end in life is to extract money from our patients and the public then assuredly we are a trade. If, on the other hand, we are prepared at some sacrifice to follow the traditions of the past and to regard our patients' welfare and the public health as the first consideration we may claim to be a profession. It has hitherto been generally admitted that there is no body of men more broad-minded and self-denying than medical men, but I cannot help thinking that if the public were to read the letters and articles that have recently appeared in our journals they would be forced to the painful conclusion that there are some medical men at least who are but little concerned as to the wants of the suffering poor but who are keenly alive to their own individual and selfish interests.

But to proceed. In discussing the question of medical attendance on the working classes I do not intend to refer to foremen, skilled artisans, and others earning £2 or more a week. These men can quite afford to pay a doctor's bill. Take even the case of the man earning, say, 30*s.* to 35*s.* a week. He may find it a difficult matter to pay a doctor's bill but it would probably be to his advantage if he contrived to do so. It is the position of the million or more in London who, according to Booth and others, are living in households where the earnings are not more than 25*s.* a week that I wish you specially to consider. These men are not earning a living wage and after paying high rents they are certainly not in a position to pay a medical man half-a-crown or even one-and-sixpence a visit when there is a prolonged attendance. How, then, are they to be medically attended? The reply is at once forthcoming—that in our poorer districts there are any number of medical men willing to attend them for less and whose fee for advice and medicine is sixpence or even fourpence. But can this attendance be regarded as satisfactory? Far be it from me, in the present disorganised state of the profession, to blame the sixpenny doctor. I detest the cheap sneers of prosperous medical and business men at those who are compelled by the force of circumstances to do cheap practice. Can a medical man living in a poor neighbourhood do otherwise when he has to compete with hospitals giving medicine and advice free of charge, or, worse still, for the few coppers that sooner or later come to be regarded by the labouring classes as the correct value of the attendance? Among those doing cheap practice one finds here and there a medical man who is not doing so by compulsion but because he believes it better to accept small sums than that the poor should be utterly demoralised by charity. To this there is the obvious objection that a medical man charging small fees cannot always carefully inquire into a patient's circumstances and so has always on his list a number who are quite able to pay an adequate fee. It must be admitted, however, that the greater number who adopt cheap practice do so because they regard it as remunerative, and doubtless it can be made remunerative if no time be given for diagnosis and the patient receives for any symptom or disease of which he chooses to complain medicine doled out from cheap stock mixtures in such doses that he must return day after day for a fresh supply. This treatment may please the ignorant patient but it is a great loss to the wage-earning power of the community. It has now, I fear, however, become so prevalent that cheap practice cannot be regarded as an ideal solution of the vexed question of medical attendance.

But why, say some medical men with whom I have spoken, trouble about these people? Let them apply to the parish. The medical men who speak thus are not, I may say, those who practise in the poorest districts and depend to a large extent on the small but welcome fees of the working classes, nor are they the men who are best acquainted with the subject. It is quite true that a person not receiving parish relief may readily get an order for medical attendance from the parish, and that often with little or no difficulty, as a relieving officer well knows that the consequence of his refusal may be a censure from the coroner or a Local Government Board inquiry. By this means the burden of medical attendance on the poorer labouring classes is thrown on the rates. To this many would probably offer no objection provided they were assured that medical orders would be given to those only who are really deserving. To medical orders there is, however, the strong objection that they are a prolific source of pauperism. The medical order is often asked for, not on account of illness, but because by this means an order may possibly be obtained for food or stimulants, and when this order is once got no long time generally elapses before the family are in receipt of relief in the regular form. In connexion with this matter one cannot fail to note the new departure at Lambeth. The Lambeth guardians, with the consent of the Local Government Board, have appointed as parish doctors men who give their whole time to attending paupers and those who obtain medical orders. What the result of this new departure may be it is as yet too soon to say, but no one can fail to perceive that it may have far-reaching consequences and entirely alter our mode of practice by placing on the rates the burden of medical attendance not only of paupers but of the more poorly paid of the working classes.

A wider scope is also being given in some districts to Poor-law infirmaries where not only the destitute are admitted but workmen suffering from accident and others who recognised that as good medical attendance and as much comfort are to be obtained in some of our infirmaries as in the regular hospitals. In the borough of Lewisham, for example, there happens at the present time to be at the head of the infirmary an extremely popular and able medical officer and the consequence is that many enter the infirmary who would otherwise go to a regular hospital. There is much to be said in favour of this system and as rates are largely paid by the working classes the logical issue is that a working man who enters an infirmary does more to preserve his independence than when he enters a hospital. At the same time, it must be said that it is extremely doubtful whether it is well that respectable working men should enter infirmaries with their traditional associations and occupy the same wards as the actually destitute, or whether the time has yet arrived when medical attendance on artisans and small shopkeepers should be thrown on the rates.

As medical men we must then admit that the problem of attendance on the labouring classes has not yet been solved either by the Poor-law or the cheap medical man. Do we then agree with that large section of the charitable public who evidently believe that it can be solved by hospitals? Burdett tells us that considerably over 2,000,000, or about half the population of London, are attended by hospitals or Poor-law institutions. Have we not then in hospitals ample

provision for the wants of the labouring poor? Unfortunately not. Medical men well know and the charitable public are beginning to recognise the fact that the 2,000,000 who frequent the hospitals are not all poor, that many of them are well-to-do, and some of them in affluent circumstances, and that the overcrowding of hospitals by this class is putting the poor in the background and preventing them from receiving the attention they ought from the over-worked medical staff. Hospital physicians and surgeons may be wroth with me but I cannot help expressing my honest conviction that those suffering from trivial and sometimes even from serious illnesses are as well attended by the sixpenny doctor as in the out-patient departments of some of our hospitals and, according to the figures of the Hospital Sunday Fund, at one-third or one-fourth the cost.

I would not have thought it necessary to say another word as to the overcrowding and abuse of hospitals were it not that their abuse has been practically denied in a special report published a few weeks ago by the Metropolitan Hospital Sunday Fund. The report begins with the following pious resolution which was unanimously adopted: "The committee is of opinion that the serious increase in the number of out-patients is detrimental to the welfare of the hospitals and patients inasmuch as they are a burden on the funds of the hospital and prevent the hospital staff from giving the necessary attention to serious cases." Unfortunately, however, the committee of the Metropolitan Hospital Sunday Fund do not appear to be a logical body, for in the same report they proceed to formulate the following conclusions: 1. "That notwithstanding the large number of attendances in the out-patient departments of the general hospitals the hospitals have hitherto increased their accommodation and qualified staffs to an extent sufficient to enable them to cope with all such cases." 2. "That there is not any serious abuse of the out-patient departments and that any which may exist can be met by a competent staff visiting the homes of the patients." As to the remedy proposed which would certainly require an enormous number of relieving officers we might point out that patients do not always visit the hospitals nearest them. How, then, can their homes be visited? This is a minor matter. But can any sane man affirm that half the population of London is so poor that they cannot pay a fee to a medical man? Is there a general practitioner in London who cannot point to endless instances of families with good and even large incomes who from the beginning of the year to the end of it are visiting hospitals and receiving gratuitous medicine and advice? And what is the moral effect of this system? A large number of the middle and even the upper classes by lying and fraud succeed in imposing on hospitals. When they have had free advice from the hospital physician they see no reason why they should pay their family doctor and it is but a further step to discover some means of circumventing their baker and grocer. There can be no doubt that hospitals confer an untold blessing on many but it is also painfully evident that without different safeguards from those we have at present they act as a not unimportant factor in demoralising a large section of the community.

Notwithstanding the many abuses connected with hospitals it must be admitted that ever since the abolition of monasteries they have not only been a necessity but done excellent work. A few, but only a few, think otherwise. When a few years ago I was one of a number who were trying to establish a small hospital in a provincial town we were met with the following objections from the wealthy employers. They held that their town which had no hospital was in a better condition physically and morally than other towns that had hospitals; that their working classes had always been self-respecting and that their moral tone would be lowered when they became the recipients of charity; and that hospitals have always attracted a crowd of loafers and impoverished the districts in which they are placed. They further pointed to the condition of many out-patient rooms and regarded it as one of the darkest blots on our civilisation that a crowd of people suffering from all kinds of disease, infectious and otherwise, should be huddled together for hours in an atmosphere laden with noxious germs and filth. Arguments of this sort would not appeal to those living in London and the south, who are accustomed to point to hospitals as the crowning triumph of our modern civilisation.

If the abuses connected with hospitals are to be remedied we must clearly perceive from whom they proceed. 1. First of all we have the general public, many of whom are engaged in contriving how they can get something for nothing, and if the committee of the Hospital Sunday Fund is not quite logical we can scarcely blame their subscribers for concluding that because they contribute a few coppers to a hospital they are entitled to receive medicine and advice free and without question. 2. Hospital managers are also to blame in trying to swell their numbers by advertising in a manner that would disqualify a private practitioner, knowing as they do that it is by pointing to large numbers they can most effectually appeal to the charitable public. The detestable system of letters, though much inveighed against, has not yet received its death blow, and yet will anyone say that it is reasonable that hospitals rather than lose a subscription should admit with little and often no inquiry those well able to pay for medical attendance? A little more courage on the part of hospital committees would soon banish many abuses. Take only one example. Many single men are now treated in hospitals for accidents which do not afterwards incapacitate them from work but for which they receive compensation. When they leave the hospital after several weeks' or months' free board and lodging they find themselves entitled to a considerable sum. In cases I myself know this money has been so utterly wasted in idleness and debauchery that the men have become a curse to their neighbourhood, and yet I have not heard of a single instance where before leaving the hospital they have even been asked for a subscription. 3. But it must be admitted that the blame does not rest entirely with the public or hospital committees. Are medical men themselves entirely free from blame? One cannot help thinking that the great majority of hospital physicians and surgeons are enthralled by their environment. How few of them seem to have any qualm of conscience or the courage to make a protest even though, if they but think of it, they must clearly recognise that in attending so large a number without fee they are committing a grave injustice against many a struggling fellow practitioner. But it is not only the medical staff of hospitals that is to blame. It is well known that the overcrowding of the out-patient departments is often in no small measure due to men doing contract practice, many of whom are but too ready to avail themselves of this means of getting rid of a troublesome or anxious case. To so great an extent has this gone in the past that surgery has now practically passed out of the hands of the general practitioner. I can vouch for it that more than 95 per cent. of accidents in this district are treated in hospitals or Poor-law infirmaries. Employers say that it is useless to send them to medical men, that medical men are not always at home, and they find that even when they are at home, after rendering first aid, they almost invariably send the patient to the hospital. Time was when the employer paid the medical men in his district for attending to accidents. The employer now sends his subscription to the hospital, and it must in common fairness be admitted that the general practitioner has little or no right to complain.

It is thus evident that the interests of so many are involved in the overcrowding and abuse of hospitals that it will now be by no means easy to get rid of them without revolutionising the whole system. Some already go so far as to say that the abuse is so chronic that the only remedy is municipalisation. The conclusion is natural in the present position. There seems to be a tendency for the rich to lessen their subscriptions and for hospitals to rely more on payments made by working men themselves. If a great number subscribe, but not all, why then, it is said, not compel all to subscribe in the form of rates? Not a few of the members of the London County Council are, I understand, strongly in favour of this issue. I cannot trespass on your patience by discussing its merits and demerits, but this much I must say: that if medical men on the staff of hospitals are paid by the State and those in general practice are not the result must sooner or later necessarily be the almost complete exit of the family practitioner and a further severance of those family ties on the maintenance of which the material prosperity and character of a nation so largely depend.

Is it, then, too late in the day for us as medical men to find a remedy? I believe the remedy is in our power and it only needs a little self-abandonment and enthusiasm on our part to obtain it. Our thanks are due to those members of the British Medical Association who have toiled hard in this matter and to the proposals put forward by them I can see no reasonable objection. The system is already in full working order at the Bolingbroke Hospital, which provides not only for Wandsworth and Clapham but for the poor of

Battersea, and I understand that the President of the Local Government Board is justly proud of the share he took in bringing it about. The *modus operandi* has been well described by Dr. G. S. Hughes, the medical superintendent, who gave me these cards which explain his words which I now quote: "In the casualty department all cases are seen once and attended to by the casualty officer. If further treatment is required the patient is given a card which has to be brought signed by a medical practitioner. In the out-patient department the surgeons and physicians do not see patients unless they are accompanied by their own medical attendant or bring a card or letter from such medical attendant. No medicinal treatment is given either in the casualty or the special out-patient departments. If medicine is required it is given by the patient's own medical man." It is easy to perceive how great a gain this must be in the long run to the consultant, the practitioner, and the public in general. If this be the remedy, and I certainly think it the best, then by all means let us work for it and see to it that institutions so noble and beneficent in character be freed from abuse and conserve the purpose for which they were designed.

But this brings us to the consideration of contract practice, as without contract practice radical reform in hospital management seems impossible. If the report on this subject made by the medico-political committee of the British Medical Association and published in July last has not been read by every medical man I certainly think it ought to be. There have been some cheap sneers at this report. I certainly regard it as most valuable and the members of that committee as deserving the best thanks of the profession for their painstaking, elaborate, and unbiased statement. There are some salient points brought out by this report: (1) that contract practice is often badly paid; (2) that there are many paying small contract sums that could well afford to pay a doctor's bill; (3) that the contract patient often expects more attendance than is reasonable, an amount of attendance, in fact, that would be resented by a private patient; and (4) that there is a possible tendency for men largely engaged in contract practice to become slipshod and superficial in their work. While we readily admit that there is much force in all these objections, there are, I should think, but few medical men at all acquainted with the subject who will deny that in some districts at least contract practice has become in some form or other an absolute necessity. This is abundantly evident from the answers given by 69 divisions of the British Medical Association to whom the question was addressed. Of these 69 divisions 63 unhesitatingly affirmed that in some districts at least contract practice is necessary. Five divisions gave a rather hesitating assent, while only one regarded it as unnecessary. Some of us may heartily dislike contract practice, and while readily admitting that medical attendance is more satisfactory in those districts where no contract practice is required, yet I hold that to a verdict like this we must unhesitatingly submit if we are to be loyal to the best interests of our profession. And, further, it has become plainly evident that the charitable public, many of whom take an intelligent interest in the welfare of the working classes, will never abandon the open door of hospital management till we can plainly show them that we are fully prepared in all possible circumstances to provide without hardship for the wants of the labouring poor. If any escape is ever to be found from our present most unsatisfactory position it will not be gained by our wasting time in considering whether contract practice is desirable or not, but in a strenuous and united effort to remedy its abuses and so to regulate its details that it may meet the requirements not only of medical men but of the working classes themselves.

I shall only refer in a word to two forms of contract practice. 1. There is the private club, which has this advantage, that a medical man is his own master, can make his own terms, and include or exclude patients as he thinks fit. To the private club in the village or where two or three medical men in one district are agreed there can be no objection, but when, as in some parts of London, streets are canvassed from door to door and canvassers paid a high premium for new patients it is surely time that private clubs shared the same fate as medical aid associations. 2. Much has been said for and against provident dispensaries. Their rules and methods vary and while readily admitting that in most of them there is much room for improvement I cannot but regard the main principle as sound. Nor can I see that they differ greatly from what many men now prefer—namely, a public medical service. The main difference seems to lie in the fact that the public medical service is entirely controlled by medical men, while in the provident dispensary the supervision rests partly with the laity. I do not find, however, that where there is a mixed supervision medical men are so enamoured of the details of business that they show any strong desire to do the work which is generally done by lay members. The great difficulty seems to me to lie in the fact that it is only the provident labouring class, skilled artisans, and small shopkeepers who care to join a provident dispensary. The drunkard, the loafer, and the improvident of the working classes, many of whom are in receipt of good wages, will not join a provident dispensary so long as they find they can readily get a medical order from the parish or free attendance at a hospital.

I have said a good deal, perhaps too much, about the symptoms and treatment of the disease. And now one word as to the diagnosis. That, of course, must depend largely on political and social developments which it is difficult to forecast, but you will forgive me for repeating that what the mode of attendance will be in the future may and ought to be decided by medical men themselves. In any case the issue is extremely uncertain. I can well remember how this country was in a similar difficulty after it had determined on compulsory education. Education was made compulsory, but how were the poor of the working classes to pay for it? Had anyone prophesied 20 years ago that within a few years from that date a Bill would be almost unanimously passed granting free education to the child of the millionaire as well as the pauper he would have been regarded as a fool or a madman. I trust you will exercise your usual forbearance and not place me in either category when I say that quite possibly within the lifetime of some of us a Bill will be passed granting free medical attendance on almost the same lines as free education. I have carefully read the speeches in the House of Commons and the arguments adduced for free education. There is not one of these arguments that could not be urged with as much or even greater force in favour of free medical attendance. Education was made compulsory. Medical attendance is also compulsory. If a child dies in London who has not been attended by a medical man there follows the inquest, in many cases the coroner's censure, and sometimes the imprisonment of the parent. The cost for medical attendance would be vastly less than the cost of free education. The London County Council is expending at the present time about £7 per annum on the education of each child, while the ordinary fee of medical men doing contract practice is 2*s*. 2*d*. per annum. I have been credibly informed of one rural district in England where the medical man attends children within a radius of six miles for 8*d*. per annum. Further, even as regards medical attendance, the trend, as we have seen, is in a socialistic direction. We have seen how at Lambeth and elsewhere the attendance not only on paupers but on the poor of the labouring classes is thrown on the rates. We see it in the hospitals for infectious diseases, where the cost not only of medical attendance but of board and lodging for rich and poor is also thrown on the rates. We see it in the proposal to municipalise hospitals. A bad day you say it will be for medical men when a Bill for free medical attendance is passed. A bad day it may be for the country in general, just as some of us may possibly think it was a bad day for the country when free education was granted, and there now follows in its wake the demand for free breakfasts and much else. I am not at all sure that it would be a bad day for medical men. Without any great entrenchment on rates or taxes medical men practising in some of our poorest districts might not be sorry to have a guaranteed minimum of at least £300 a year, while, of course, the wealthy, and many of the professional and middle classes, would still prefer to pay their medical attendant just as they prefer to pay for their children at school though they could readily avail themselves of free education. I must apologise, however, for speaking of what is not yet within practical politics and is possibly outside the region of profitable discussion. If, however, there is any medical man here interested in the matter I would be glad to discuss it with him privately.

AMERICAN TINNED MEAT.—At a meeting of the Bath board of guardians held on June 27th it was resolved to supply the inmates of the workhouse with English fresh meat instead of the American tinned meats which were now used. In making this change the contract or tinned meats would be terminated forthwith.

TWO CASES IN WHICH GASTRO-ENTEROSTOMY WAS PERFORMED IN THE COURSE OF OPERATION FOR PERFORATED ULCER.

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CASE 1.—On Feb. 24th, 1906, I was asked by Dr. J. Irving of Huddersfield to go over to see, a few miles out, a man, aged 55 years, who at 6.45 that morning had been seized with agonising pain in the abdomen, requiring the use of morphine hypodermically and leading Dr. Irving, who knew the previous history, to conclude that the symptoms must be due to the perforation of a gastric ulcer. When I arrived the morphine had had its full effect and the patient was lying comfortably on his back, free from either pain or sickness. There had been no vomiting since the seizure and the pulse was a little over 80, regular and good. The abdomen was not distended but was still and rigid, and there was some tenderness on handling, most marked in the right hypochondrium. The percussion note seemed of little value but we thought that the liver dulness was certainly not quite absent.

Dr. Irving gave me the following history. For 30 years there had been irregular attacks of abdominal pain so severe as to cause the patient to roll on the floor. There were three or four attacks in the course of a year, the pain and discomfort sometimes lasting for a week. At other times there was pain only after a particular meal and it could be brought on with certainty by errors in diet, such as overcooked fish or strong tea. About 12 or 15 years ago there was a period (two or three years) of improvement while taking pepsine. Later the attacks lasted for a month or six weeks and during the course of one he would lose as much as 25 pounds in weight. A year ago he commenced to vomit and for a month about Easter he vomited large quantities of sour material. He then remained pretty well till December last, when the pain became worse again, recurring more or less every day, and about this time there supervened signs of dilatation of the stomach. Still more recently there had been two or three days' intervals of fair comfort after vomiting about two and a half pints, and washing out the stomach would always afford immediate relief. Three days ago the pain was so severe and prolonged that morphine had to be given hypodermically. Next morning he vomited and then remained comfortable until the sudden attack of overwhelming pain a few hours before I saw him.

I must here say that whatever credit is due for the fact that the operation was performed without delay must be given to Dr. Irving. The patient was so comfortable and the abdominal signs were so inconclusive that, considered along with the pulse and the entire absence of sickness, I should certainly have felt constrained to wait for a time if he had been within easier access; but Dr. Irving was so insistent upon the significance of what he had seen in the early morning that I accepted his view, feeling that at any rate we should find ample indication for gastro-enterostomy if nothing more. The operation was commenced exactly six hours after the onset. Upon incising the peritoneum the escape of gas and characteristic "mutton broth" fluid at once made matters plain. There was a large quantity of fluid which had to be ladled out before the perforation could be seen. It was close to the pylorus which was somewhat deeply recessed and fixed under the liver. It was about three-eighths of an inch in diameter, of the usual punched-out appearance, and there were widespread thickening, induration, and puckering of the walls of the stomach and duodenum. With great difficulty four sutures of stout Pagenstecher thread were placed very widely, infolding about three-quarters of an inch on each side of the opening and placing the ulcer at the bottom of a steep gutter, any attempt to approximate the opposite faces of the gutter by tightening the sutures resulting in an obvious tendency to cut through, as had also an attempt to use a closer stitch with finer thread. But leakage was arrested and we had to be content. It was clear, however, that the procedure had practically closed the pylorus and that gastro-enterostomy would have to be done. More fluid was removed by ladling with the hands as before and when the transverse mesocolon was exposed the posterior operation was performed according to the method of my colleague, Mr. H. Littlewood. Then I passed my left hand down towards the pelvis and using the forefinger as a guide I thrust the knife through the abdominal wall immediately above the symphysis pubis, and introduced a glass drainage-tube into the recto-vesical pouch. The upper wound was closed without drainage and all the fluid which could be removed was withdrawn by syringe through the tube. After the dressing was applied the patient was placed in bed propped almost upright. He bore the operation very well, but liquor strychninæ (10 minims) was given hypodermically with instructions that half this dose was to be added to each enema of a half pint of normal saline solution every four hours.

The after-course was uneventful. On March 21st Dr. Irving wrote to me as follows: "There was no pain and no sickness. At the end of 48 hours there were indications of cardiac failure, which passed off on laying him flat on his back. After 60 hours the drainage-tube was replaced by a gauze wick for 12 hours, upon the removal of which the opening closed and the wound began to heal. There was never any feeling of sickness and warm water was allowed freely from the first. The patient dictated a long letter on the fourth day and took up various business matters with his secretary on the sixth. The only difficulty was in restraining his appetite, as he felt so hungry. The wound is soundly healed." This patient has resumed his ordinary activities and is now quite well in every respect, having entirely lost all his stomach discomforts.

The following notes of the other case are extracted from the reports of the Leeds General Infirmary.

CASE 2.—The patient, a man, aged 39 years, was admitted by me from the care of Dr. W. Kemp of Castleford on April 24th, 1902, in a condition of collapse. The history, which was obtained later, was as follows. About two years before admission he became subject to pain in the stomach coming on half an hour after food and subsiding after retching and vomiting. This pain gradually became more severe and in spite of treatment he grew worse and worse and steadily lost flesh. Six weeks previously he became unable to work owing to pain, vomiting, and weakness, and shortly after leaving off work he had a severe attack of hæmatemesis, vomiting a large quantity of dark blood after the exertion of taking a walk. He became very faint and was put to bed. Under restriction to milk and water, with ice to suck, the hæmorrhage did not recur and in a fortnight he was able to get up but did not resume work. At about 1.30 on the morning of the day of his admission to the infirmary he was suddenly seized with violent pain in the abdomen, which seemed to radiate from the umbilicus and soon became insupportable. He got out of bed, but although he felt very sick he was unable to vomit. He was put back to bed in a cold sweating collapse, and his medical man came and prescribed an opiate, with hot applications to the abdomen. When seen again at 10 A.M. he was no better and Dr. Kemp, diagnosing perforation of a gastric or duodenal ulcer, communicated with me with a view to his admission to the infirmary, where he was received later in the day and was taken at once to the operating theatre, no report being taken of his condition beyond a brief note that he was in a state of extreme collapse, with a slightly distended rigid abdomen, dull in the flanks and resonant over the liver area. He was in a profuse cold sweat and had a feeble running pulse of 150. Chloroform was administered and the abdomen was opened by a median incision from the tip of the ensiform cartilage to the umbilicus. A considerable œdema of the subperitoneal tissue, glistening and watery-looking, was noticed, and upon incising the peritoneum gas escaped, along with a large quantity of dirty-looking fluid, flocculent, but not containing any recognisable fragments of food and with no particular odour. There was readily seen a circular opening about three-eighths of an inch in diameter on the anterior upper surface of the duodenum, well beyond the pylorus and almost inaccessibly recessed under the liver. Around the sharply cut, punched-out opening was a wide zone in which the intestinal wall was thick, leathery, and rigid, white and scarred. By means of a long needle-holder the opening was with considerable difficulty closed by Lembert's sutures passed very widely. When this was completed it was seen that the infolding of the stiffened tissues had occluded the duodenum and it became clear that gastro-enterostomy would be necessary.

This was performed by the anterior method, no attempt being made to cleanse the parts, which were swamped in the escaped fluid, as the patient's condition was so critical that any prolonged or formal toilet of the peritoneum was out of the question. Drainage was provided by the introduction of a glass tube into the recto-vesical pouch through a small median incision above the pubes, rapidly made by thrusting the knife through the abdominal wall on to the left forefinger passed down within. The upper wound was then sutured, with gauze drains introduced towards the kidney pouches, and the patient was put to bed in the sitting position. After a few critical days he eventually made a good recovery and has since been heard of as a public-house cadger, apparently able to dispose of alcohol in quantity without inconvenience.

I have related these two cases partly as instances of gratifying and unexpected recovery from a very complicated and unpromising condition but mainly for the purpose of illustrating the uselessness of elaborate peritoneal toilet provided that adequate drainage is established. It is now more than six years since I washed or sponged out the general peritoneal cavity, and although I have seen many cases in which I am firmly convinced that to have done so would have finally destroyed the patient's slender remaining chance of recovery, I cannot call to mind a single case in which I have thought that it would have turned the scale in his favour.

Although I do not suggest that this practice is either original or in any degree uncommon, I still hear and read from time to time of cases in which it has been considered desirable to wash out the general peritoneal cavity with salt solution and now and then I hear of a patient surviving the procedure. I was led to my present uncompromising attitude on this point accidentally and by force of circumstances. I was asked by my colleagues, Dr. T. Churton and Dr. T. W. Griffith, to operate upon a young woman in whose case they had made a diagnosis of perforated gastric ulcer upon all the necessary indications. I found free gas and a large quantity of the dirty "mutton-broth" fluid but I never actually saw a perforation, for the patient, who was most desperately ill, at this stage became apparently moribund and I was told she would certainly not survive to be removed from the table if the operation was prolonged for more than a minute or two. I therefore at a thrust transfixed the abdominal wall above the symphysis pubis, passing down the left hand to assure myself that the bladder was out of the way. A Bantock's tube was passed into Douglas's pouch and the patient was sent back to the ward to die. However, as she rallied a little she was propped up into a sitting posture so that any fluid still escaping from the unclosed perforation might find its way out as speedily as possible through the drainage-tube. There was a profuse discharge at first which gradually diminished and ceased. Although for more than a week this patient seemed hopelessly ill, she eventually, to our great surprise, recovered, and since that event I have never performed any general peritoneal toilet.

Some of my cases of perforated gastric ulcer have been operated upon in very unpromising condition after discouragingly long intervals, and although it is of course impossible actually to prove anything of the kind I am firmly persuaded that the remaining shadow of a chance would have been extinguished if they had been subjected to the further exhaustion of a more prolonged operation and to the shock of a more or less sudden and violent inundation of the peritoneum by a large quantity of fluid of whatever character. I am sure that amongst these cases many lives have been saved by intravenous infusion; I am a convinced believer in the value of strychnine; enemata of salt solution given by half-pints every four hours, or up to the full tolerance of the rectum; and for distension the turpentine enema. I think that a great deal of quite unnecessary torment is caused by this incomprehensible niggardliness in the matter of drink which dies so hard a death, for I fail to understand why a securely sutured stomach cannot be trusted to deal with a little plain water or other bland fluid when we see how constantly it safely disposes of considerable quantities of far more undesirable and presumably noxious material. In many hospitals it appears to be part of a general ritual which ordains that all patients after operation shall be subjected to a torment of thirst for 24 hours at least, or at the most to tantalising teaspoon sips which almost aggravate their distress.

Leeds.

A CASE OF CYANOSIS WITH POLYCYTHÆMIA.

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THE following case is published as a contribution to the study of the polycythæmic condition. The presence of cardiac symptoms, together with the absence of certain enlargement of the spleen, renders it doubtful whether the case can be claimed as one of splenomegalic polycythæmia, though there are certain features which point in that direction. The patient, a girl in domestic service, aged 21 years, was sent to the out-patient room of the Birmingham General Hospital by Mr. L. S. Tomkys of Lichfield on June 29th, 1905. She complained of shortness of breath and swelling of the legs. She was markedly cyanosed and a blood count showed a large excess of red corpuscles. I admitted her into the wards under the care of Dr. T. Stacey Wilson, who kindly placed her under my care, and I have since had her under observation at the Jaffray branch hospital. The family history contains little of importance. Her father committed suicide at the age of 62, years and her mother was found dead in bed, aged 54 years. Three brothers and four sisters are alive and in good health. Two brothers died in infancy and one in later life after amputation of a leg for injury. As a child she was able to play and to take exercise as other children. When seven years of age she had scarlet fever but there is no recognisable history of the occurrence of nephritis. From this time, however, she appears to have been in delicate health; she never passed beyond the fourth standard at school and gives as a reason for her backwardness irregularity of attendance due to frequent illness. She has never had rheumatic fever or other joint affection. Menstruation began at the age of 17 years and has generally been irregular. She has not menstruated at all for the last 18 months. She considers that the present illness began about four years ago when she first complained of shortness of breath on exertion. For the past year her legs have been swollen at intervals and she has noticed a dusky and swollen appearance of the face and eyelids. She has had occasional attacks of slight præcordial pain and has been subject to "fainting fits" after exertion in which she has lost consciousness and occasionally passed urine.

On admission the patient's face was of a dusky bluish colour and appeared somewhat swollen. The conjunctivæ were slightly œdematous and showed numerous groups of remarkably large and tortuous vessels. With the exception of the lips the mucous membranes were not cyanosed, but the skin of the hands and feet was dark red in colour and there was a slight tendency to clubbing of the fingers. Over the trunk were numerous scattered pigmented spots for which no origin could be assigned. The respirations were increased in frequency and the patient became short of breath on any exertion. The heart was somewhat enlarged. The impulse was in the fifth space, slightly outside the vertical nipple line, and the upper limit of the deep cardiac dulness extended into the second left space, in which position were felt a slight diffuse pulsation and a shock synchronous with the closure of the aortic and pulmonary valves. At the apex there was a short systolic murmur, hardly to be traced outwards and not heard at the angle of the scapula. The second sound was clear at the apex but reduplicated and accentuated in the pulmonary area. There was no murmur at the base. The pulse was 120 on admission, small, and of low tension, but with rest it quickly fell to 78 or 80. The blood pressure was not estimated until August 25th when it registered 115 millimetres of mercury. The edge of the spleen could not be felt, even at the end of a deep inspiration, but its dulness extended forwards into the axilla and appeared to merge into that of the left lobe of the liver. The liver dulness began at the upper border of the sixth rib in the nipple line; its edge could just be felt on deep inspiration. The lungs were normal on examination. There was no enlargement of the thyroid or lymphatic glands. The urine varied in quantity from 20 to 40 ounces in the 24 hours. On admission the specific gravity was 1014 and it contained 0·1 per cent. of albumin and

1·3 per cent. of urea. Under the microscope a few hyaline and granular casts were seen with renal and bladder epithelium. On July 9th the albumin measured 0·05 per cent. and the total quantity of urea passed in the 24 hours amounted to 140 grains. On August 6th, after centrifugalisation, no casts were discovered. The optic discs showed considerable blurring of the edges, obviously due to œdema. In the right disc the veins were greatly enlarged and very tortuous; the arteries were also large. The outer part of the disc showed a very remarkable group of small arterioles and enlarged vessels were seen scattered about the retina. Near the macula was a small patch of pigment, which Dr. D. C. Lloyd Owen, who kindly examined the discs, informed me was the result of former choroiditis. The left disc showed similar appearances but to a much slighter degree. The blood counts were as follows:—Red corpuscles: June 29th, 7,000,000; July 1st, 8,045,000; 19th, 7,900,000; 22nd, 6 812,000; August 5th, 7,518 750; 19th, 6,297,000; Sept. 8th, 8,650 000; and Oct. 2nd, 6 825,000. White corpuscles: June 29th, 7000; July 1st, 7000; and 22nd, 5600. The hæmoglobin was estimated on July 22nd by Oliver's hæmoglobinometer and was much in excess of the limit of the scale, which registers up to 120 per cent. Three differential counts of the white corpuscles were made with the following results:—Polymorphonuclears: July 1st, 74 per cent.; 22nd, 61·4 per cent.; and 29th, 70·5 per cent. Lymphocytes: July 1st, 19·3 per cent.; 22nd, 29·4 per cent.; and 29th, 20 0 per cent. Large mononuclears and transitionals: July 1st, 6·3 per cent.; 22nd, 7·3 per cent.; and 29th, 7·9 per cent. Eosinophiles: July 1st, 0·2 per cent.; 22nd, 1·9 per cent; and 29th, 1·6 per cent. No abnormality in the size or shape of the red corpuscles was observed during any of the differential counts and no nucleated red cells were seen. On one occasion two myelocytes were noted in a prolonged count. No estimation was made of the viscosity of the blood but Mr. J. Priestley Smith on three occasions examined the blood with regard to its coagulability by a method which he has not yet published. He gives me the following note: "The method employed aims at measuring, not the time necessary for coagulation, as in Dr. Wright's method, but the force required to break the clot when it is fully formed. The blood is of measured quantity, is placed between two surfaces of ground glass, the one plane, the other of known curvature, and is protected from evaporation. In the case here described the breaking force was greater than that of normal blood. It was, however, much less than that which I have found in leucocythæmia. The method is as yet, I think, too new to justify publication of details." With rest in bed the cardiac symptoms improved. Within a few days the œdema disappeared and it did not return on getting up. The cardiac enlargement slowly diminished and by the beginning of August the impulse was within the nipple line, though the upper limit of dulness still extended into the second space and the pulsation and diastolic shock remained noticeable in the pulmonary area. A faint apical systolic murmur was still to be heard on the patient's discharge from the hospital. As shown by the above blood counts the polycythæmia diminished with the improvement in the condition of the heart but it did not disappear. The count of 8,650 000 on Sept. 8th was the first made after the patient's transference to the Jaffray Hospital, which is situated some three and a half miles from the General Hospital. The journey was made in an ambulance and involved no fatigue and the patient had been walking about the ward for some time before her removal. I doubt, therefore, whether the high count can be attributed to the effects of the journey. This and the last count were not made by myself. With the marked improvement in the cardiac physical signs there was no recognisable change in the cyanosis or in the engorgement of the conjunctival and retinal vessels.

In endeavouring to arrive at a conclusion as to the nature of the polycythæmia there is much to be said in favour of regarding it as merely an accompaniment of the cyanosis due to weakness of the cardiac muscle. Although in the hitherto published cases of splenomegalic polycythæmia slight enlargement of the heart has occasionally been noted and in several cases there has been a soft apical systolic murmur, yet, with one exception, none of them has shown any definite symptoms of cardiac incompetence. The one exception is to be found amongst the seven cases published by Türk,[1] but as there was here advanced chronic nephritis with symptoms of heart failure I should be inclined to doubt the advisability of including the case in the above-named group. The age of my patient is perhaps a little against the diagnosis of splenomegalic polycythæmia, only two of the recorded cases so far having occurred in patients under 30 years of age and 24 being the age of the youngest. The magnitude of the polycythæmia is no reason for denying it a cardiac origin, for Dr. G. A. Gibson[2] has recorded one case of mediastino-pericarditis with a red cell count varying from 8,000,000 to 8,800,000, and one case of chronic bronchitis and emphysema with mitral incompetence, and another of pure mitral incompetence, in each of which the red cells numbered 7,500,000 to the cubic millimetre. It is to be noted, however, that in the first two of these three cases the polycythæmia completely disappeared with the cessation of the cardiac symptoms; the result of treatment is not noted in the third case. In my case, although the signs and symptoms of cardiac incompetence nearly disappeared, the polycythæmia still persisted at the time of the patient's discharge from the hospital though in a lesser degree than on admission, and the remarkable appearance underwent no alteration. In addition to the persistence of the polycythæmia the curious dilatation of the conjunctival and retinal vessels and the pigmentation of the trunk are in favour of the alternative diagnosis. The differential white cell count is, on the whole, in accordance with that found in most of the splenomegalic cases, though the percentage of polymorphonuclear leucocytes is not quite so high as that generally noted. No normoblasts were seen at any time, whereas in many, but not all, of the splenomegalic cases a few of these cells have been observed. Much weight can hardly be attached to the presence of the two myelocytes seen on one occasion but, as far as it goes, this fact tends to connect the case with the splenomegalic group. As already stated, there was no marked enlargement of the spleen in my case but a similar absence of enlargement has been noted in two of the published cases of splenomegalic polycythæmia.

I have assumed in this discussion that the latter condition is a "definite clinical entity," to use the words of the Editors of THE LANCET in a note preceding my paper published in that journal on Feb. 22nd, 1902. This assumption is disputed by Dr. Gibson, who is inclined to regard the condition as merely one secondary to cardiac weakness. But the case under Dr. R. Saundby's care published in that paper was so entirely free from symptoms of heart weakness and the clinical picture was so totally unlike that of any cardiac case that I have seen that I cannot feel any doubt that it must have another pathology. At present Dr. F. Parkes Weber's explanation of the condition as due to an "increased erythroblastic activity involving a great part, but not necessarily the whole, of the bone marrow," seems likely to hold good. At all events, no other satisfactory theory has been proposed.

Birmingham.

[1] Wiener Klinische Wochenschrift, 1904, Nos. 6 and 7.

A CASE OF HÆMATOMYELIA DUE TO TRAUMA,

WITH OBSERVATIONS ON THE COURSE IN THE SPINAL CORD OF THE SECRETORY NERVES TO THE SWEAT GLANDS.

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HÆMATOMYELIA is the term used for hæmorrhage into the grey matter of the spinal cord. The hæmorrhage is due to trauma in 90 per cent. of the cases and is caused by fracture or dislocation of the vertebræ in some cases; in others the injury may give rise to hæmorrhage in the grey matter without any actual lesion to the bony canal. In all of Thorburn's cases the hæmorrhage occurred at the level of the fourth, fifth, and sixth cervical vertebræ, and he considers it probable that the hæmorrhage is usually produced by a partial dislocation with recoil. The hæmorrhage takes the form of a cone, or rather of two cones, tapering off upwards and downwards and extending over a considerable length of grey matter. This spread of the hæmorrhage

[2] Abstract of a paper read before the Royal Society of Edinburgh, THE LANCET, Jan. 17th, 1903, p. 155.

through the grey matter around the central canal is due to the blood tracking along the line of least resistance, for experiments in animals have shown that fluids injected into the spinal cord tend to find their way into the grey matter and spread through it in preference to the white matter. Hæmatomyelia is not so very uncommon—five cases were admitted into the Manchester Royal Infirmary in three years—and the condition is liable to be mistaken for one of simple crush of the cord unless the symptoms are carefully investigated. The hæmorrhage in the following case probably started at the first dorsal segment of the cord, producing its maximum effects at this level, but it also spread upwards to the fourth cervical and downwards to the third dorsal spinal segments.

The patient, a brewer's drayman, aged 42 years, was admitted into the Bolingbroke Hospital on August 30th, 1905, under the care of Mr. H. Burrows. He was being driven along in his dray when he slipped and fell out over the back of the cart. He turned a "somersault" as he fell and struck the back of his head and shoulders on the ground, the head being forcibly bent forwards on to the chest at the same time. He felt something go "click" at the back of his neck but was not stunned at all by the fall and was immediately helped on to his feet. He was quite positive that he was able to use his legs and even to stand with support immediately after the accident but within a few minutes he felt a numbness spreading downwards from the trunk to the lower limbs and in about five minutes the legs were completely paralysed. He was admitted into the hospital about half an hour after the accident.

On admission the patient was a healthy-looking man, very tall and strongly built; he was quite sober and could give a clear account of the accident. There was a small abrasion on the back of the head but no deformity or irregularity about the spine. The third dorsal vertebra was tender on firm pressure. The pupils were equal and reacted to accommodation and light. Both arms were weak and as he lay in bed he could only just manage to raise his hands to his mouth. The lower six intercostal muscles, the abdominal muscles, and the muscles of the lower limbs were completely paralysed, respiration being carried on by the diaphragm only. Sensation was unimpaired in the head, the neck, and the arms, except for the skin over the little and ring fingers of each hand where there was considerable numbness. On the front of the chest sensation was normal above the level of the nipples, while below this level the sense of pain and temperature was absent. The upper limit of this "dissociation of sensation" was variable: thus on tracing out the area for anæsthesia to pain with a prick of a pin from above downwards the prick could be perceived as a painful sensation as low as the level of the fifth rib in the nipple line, while in the reverse direction the prick did not cause any pain till the level of the third rib was reached. The lower limit for perception of temperature varied equally and was at a slightly higher level on the chest wall than that for the sense of pain. On the back sensation was normal at the level of the first dorsal vertebra; from here to the sixth dorsal vertebra the sense of pain was present but was blunted (thus the patient could not distinguish between a prick and a pinch); from the sixth dorsal vertebra downwards there was no perception of pain or temperature. All over both legs the dissociation of sensation was well marked, the very lightest touch being distinctly felt. The knee-jerks were present on admission but disappeared completely by the third day to reappear again at the end of the first week, and by the tenth day from the accident they were markedly exaggerated. Priapism and turgidity of the penis were noted. The urine was retained and the motions were passed involuntarily.

By the fifth day after admission voluntary power in the arms had returned completely. At first the patient complained of a severe gnawing pain in both elbows in the neighbourhood of the internal condyle. There was no local lesion here and the pain seemed to be a referred pain along the ulnar nerves from the spine. A good deal of pain in the back of the neck was experienced also. A catheter was passed twice daily for five weeks, by which time, owing to the return of power in the abdominal muscles, he was able to empty his bladder naturally. The occurrence of cystitis was prevented by careful cleansing of the penis each time the catheter was used and by wrapping the organ in an antiseptic dressing in the intervals; in addition urotropin was given from the beginning as a prophylactic. After six weeks there was slight return of voluntary power in the legs, but by this time the legs were becoming very spastic and splints had to be used to correct the tendency to flexion and adduction. During the first week there was a passive serous effusion into both knee-joints which showed a tendency to recur later; this may have been a trophic change comparable to the joint affections of syringomyelia. At the end of two months there was marked atrophy of the muscles of the thenar and hypothenar eminences and the interossei of both hands.

The man was discharged from the hospital on Nov. 24th. He was readmitted on Feb. 9th, 1906, because the flexion deformity of the legs had greatly increased; painful spasms preventing sleep occurred in the legs at frequent intervals and the knees could now be straightened beyond a right angle and had become so pressed together by the spasms of adduction that a large sore had formed over the inner condyle of the right leg. There were several sores on the posterior surfaces of the legs, caused by the splints which had been employed ineffectually to correct the deformity. Under chloroform the inner and outer groups of hamstring muscles were tenotomised and the legs were forcibly straightened and fixed on a Thomas's double extension and abduction frame, the abduction being about four feet at the level of the ankles. Owing to the overstretching the adductor muscles became quite powerless and the adductor spasms ceased at once, and the flexion spasms were rendered very slight and occasional; the patient experienced great relief from the first and was able to sleep again. He was kept on the frame for a fortnight and then it had to be omitted owing to the formation of pressure sores; the knees now could be kept straight by means of short back splints and the power in the legs was much improved; the right leg could be raised off the bed and abducted and adducted at will so long as the knee was kept straight by a back splint. This method of overcorrecting deformities produced by paralysis is especially useful in spastic paralytic conditions, as in addition to preventing the occurrence of the spasms it allows the weakened opposing muscles to regain their tonicity and power and the general effect on the strength of the limb is most marked. The great difficulty in these spinal cases is the formation of pressure sores and with every care these are nearly bound to occur; still the benefits derived from the use of the frame quite outweigh this disadvantage.

Remarks.—The presence of the reflexes on admission is interesting; it may perhaps be explained by the fact that the hæmorrhage had not finished extending as the case was seen so soon after the accident; later by the third day the hæmorrhage had produced its maximum effect and the reflexes were consequently entirely abolished. At the end of the first week the reflexes reappeared and became exaggerated, as is usually the case when the lesion is well above the lumbar enlargement.

No spinal myosis was observed in this case; it may have been overlooked, as Thorburn considers this symptom nearly a *sine quâ non* in hæmatomyelia; on the other hand, Gowers in an account of the affection in his "Diseases of the Nervous System" does not even mention this symptom.

The dissociation of sensation was present and well marked and continues at the present time, seven months after the accident, though it is not now so definite as at first. The level of the anæsthesia on the front of the chest pointed to the lesion not reaching the fourth cervical segment of the cord, for the descending branches from the third and fourth cervical nerves to the skin of the upper two or three intercostal spaces were unaffected. The fact that sensation behind extended very much lower than segmental appearances would lead one to expect is difficult to explain but is almost universally met with (Thorburn).

Bedsores proved a most troublesome complication; the heel could not be left in contact with the bedclothes unprotected by wool for an hour without blistering, and if the patient was rolled over on to his side a sore would form over the great trochanter in a very short time in spite of water beds and other precautions. We see, therefore, that it is not the posterior columns of the cord which convey the trophic nerves to the skin, for these were undamaged in this patient, but it is the grey matter which controls the nutrition of the skin.

The diagnosis of hæmatomyelia rests on the suddenness of the onset of the symptoms after the accident; in this case it was only a matter of minutes, in Dr. S. J. Sharkey's case[1] it was three hours and this would probably be the outside limit. There are no initial spasms and rigidity as in spinal

[1] THE LANCET, Oct. 31st, 1891, p. 973.

meningeal hæmorrhage, which also takes longer to develop. No initial fever is present as in myelitis, a point which is of great importance in diagnosing between the non-traumatic cases of hæmatomyelia and myelitis. The dissociation of sensation is most characteristic and distinctive of the disease. The atrophy of groups of muscles, in this case of the small muscles of the hands, points to a central destructive lesion in the grey matter of the anterior cornua. The site of the lesion also—namely, in the lower cervical region—is characteristic.

The prognosis is better than could be expected from the initial severity of the symptoms; if the patient gets over the immediate dangers of bronchitis, cystitis, secondary myelitis, and bedsores he gradually recovers some power in the legs and the process of improvement extends over a period of a year or more.

Observations on the course of the secretory fibres to the sweat glands.—The following observations with regard to sweating were made on this patient at the end of the first week after the accident. An injection of pilocarpine nitrate (one-fifth of a grain) was given subcutaneously and was followed by a further injection of one-sixth of a grain in half an hour. Sweating was produced all over the body but was most marked on the lower limbs and trunk below the level of the nipples. On the next day the patient was given a hot-air bath in the ordinary way, the hot air entering from the foot of the bed and passing over the legs and then over the rest of the body. After 20 minutes sweating occurred which was distributed over the body as follows. The head, which was necessarily not included in the bath, neck, arms, and upper half of the chest sweated profusely; the lower half of the chest and upper part of the abdomen were only just moist; while the rest of the body below the level of the iliac crests was quite dry. At the same time there was a rise in body temperature of two and a half degrees.

These simple observations, I think, raise the following points in regard to the nervous mechanism of sweating in the human subject. They were carried out at the end of a week after the injury, as by then the vessels supplying the paralysed parts ought to have recovered their tone and the initial vaso-dilatation should have subsided. In the first observation the increased sweating in the paralysed parts is due to the uncontrolled action of the pilocarpine on the cells of the sweat glands in these parts. This effect has been used by Victor Horsley and others to determine exactly the upper limit of a spinal lesion, especially before an operation is performed for the relief of pressure by laminectomy; it is also useful as a means of distinguishing functional paraplegia with anæsthesia from organic disease. The object is much better attained by means of the second method, which allows comparison to be made between the absolute dryness of the skin in the paralysed parts with the profuse sweating present in the unaffected region.

In animals there is a subsidiary sweat centre in the lumbar enlargement of the spinal cord, for if in the cat the spinal cord be cut across above the exit of the twelfth thoracic nerves and the animal exposed to hot air (60° to 70° C.) for from five to ten minutes sweating still occurs in the hind limbs (Luchsinger). On the other hand, in man there is no positive evidence of the existence of such a centre in the lumbar cord; in the cases of injury to the cord where the sweating has been recorded there has always been an interference with reflex sweating, as in this case. The lumbar sweat centre may, however, have had its excitability so depressed by the injury that no reflex sweating could occur; in animals the experiment does sometimes fail, probably from this cause. The mere fact that reflex sweating does occur in animals is positive evidence for the presence of a sweat centre in the lumbar cord in animals, while the fact that reflex sweating has not been observed in man is negative evidence as far as it goes against the presence of a sweat centre in the lumbar cord in man. The abolition of the reflexes at first after a spinal injury points to the general depression in the excitability of the cord but in this instance the experiment was carried out at the end of the first week at a time when the reflexes were returning and becoming exaggerated and therefore the spinal sweat centre, if it had existed, should no longer have had its excitability lowered by the accident. We want, however, further clinical evidence on this point, as the cases where any record of the sweating below a spinal lesion has been kept are too few to allow one to dogmatise on the point. If it is granted that the lumbar sweat centre is non-existent in man, then normally sweating is produced by impulses conveyed to the periphery by secretory nerve fibres which pass down the cord from the sweat centre or centres situated in the medulla or upper part of the cord; the passage of these impulses was interrupted in this patient by the hæmorrhage in the cervical region into the grey matter round the central canal. This fact affords, therefore, some evidence that the secretory fibres for the sweat glands pass down the spinal cord in the grey matter. The rise of two and a half degrees Fahrenheit in the body temperature showed how the heat-regulating apparatus is put out of working order in these cases of spinal injury.

I am indebted to Mr. Burrows, under whose care the patient was while in the Bolingbroke Hospital, for leave to publish these notes.

Bolingbroke Hospital, S.W.

MOTOR-DRIVER'S SPINE (?).

BY W. J. BURROUGHS, M.R.C.S. ENG., L.R.C.P. LOND.

THAT the list of diseases depending for their causation upon the occupation of their victim is already a lengthy one few will question. Doubtless, also, as such occupations increase so in like manner will the diseases arising therefrom. The case the details of which I subjoin is probably yet another addition to the already considerable total and may possibly prove of some degree of interest when viewed in that light.

The facts are as follows. On the morning of April 4th last I was called to a strong, healthy-looking man, of fine physique, who informed me that his work was that of a motor omnibus driver. His age, he stated, was 34 years, his height was six feet, and his weight was 14 stones. His father, previously a healthy man died at the age of 59 years from some acute form of diarrhœa which was neglected. His mother, aged 70 years, had always been, and still is, a healthy woman. He had, too, he said, one sister, aged 29 years, who had always enjoyed excellent health, as she does at the present time, and two brothers who died in early infancy, the cause of their decease in either instance being unknown to him. Personally, the patient said that he had always been a very healthy and temperate man, a fact borne out by his personal appearance. He had never suffered from any venereal disorder, neither was there any history of external injury to account for his present condition.

On the day previous to his illness (April 3rd) he began his work at 3 P.M. and continued to 12 midnight. The engine he drove was a 30 horse-power Mercedes. I merely mention this fact as an engine of such horse-power requires a very considerable amount of physical energy to start it and in an ordinary way it is set in motion in the morning and does not require restarting all day but is simply connected or disconnected as movement or the reverse is required of the vehicle. On this particular day, however, a certain portion of the mechanism acted badly and caused the engine to stop a considerable number of times and on each occasion it had to be restarted by the patient. Whether on this account or on that of the extra vibration produced by the defective working of the machinery, he appeared to have felt more than usually exhausted on his return home and on the following day his condition was as follows. His facial expression was one of anxiety and he was obviously in a highly nervous state, getting easily excited. He complained of persistent acute pain which he referred to the right hip and which became so intensified by pressure that he was unable to lie on that side. He also noticed a dull aching pain across the loins, more pronounced on the right and, further, that he was unable to move the leg of this side, which he described as being so painful that he could scarcely bear the weight of the bedclothes upon it. Owing to the tenderness of the right hip and back he found the position of the greatest ease either in resting upon his left side or in an attitude of semi-pronation.

On examination his pulse was 75, his respirations were 20, and his temperature was 98 6° F. (no temperature higher than this was recorded throughout). His pupils were equal and reacted to light and there was no loss of accommodation. Tenderness on pressure was experienced to the right of the third and fourth lumbar spines, extending outwards for about six inches over an area about three inches wide. The whole of the right leg was in a state of spastic rigidity. Both

the hip and knee of this side were very slightly flexed but any attempt at further flexion or extension caused considerable pain. There were no bladder or rectal symptoms. The patellar reflex in both legs was exaggerated but much more markedly on the right side and on both its production caused shooting pain referred to the lumbar region. The skin of the whole of the right leg was hyperæsthetic, this state being more pronounced upon the inner surface of the limb. The drawing of the pulp of the forefingers slowly up the sole of the right foot caused great pain and the same action conducted quickly made the patient cry out loudly and draw up the foot, an action he was quite unable to accomplish voluntarily. Ankle clonus could not be obtained. The condition of the left leg apart from the increased knee-jerk was practically normal. On the following day (April 5th) the pain in the hip was slightly less, though its presence had given the patient a bad night. The muscular rigidity had considerably decreased but girdle pain coming on at intervals and starting at a spot corresponding to the third and fourth lumbar spines was complained of. The patellar reflexes were almost unobtainable and the sensation of the right leg was greatly diminished. The pulse, the respiration, and the temperature were normal. On the 6th the knee-jerks of both sides were absent. The rigidity had disappeared and complete anæsthesia of the whole of the right leg with a diminution of sensibility to heat and to cold existed, sensation in the left leg remaining unimpaired. The pain in the hip was considerably better. On the 7th the knee-jerks were still absent. The sensibility of the right leg had returned slightly, the patient with his eyes closed being able to recognise when he was touched, though unable to locate the precise spot or to estimate how many pin-points or how many fingers were placed upon the affected limb at a given time, even when a considerable interval existed between them. The pain in the hip had entirely gone and he had only experienced a slight sensation of girdle-pain at long intervals. The patient was able to move much more freely in bed, but although he was now able to sit up he could not do so for more than a few seconds at a time, as it still caused him pain in the back. On the 8th his condition was practically unaltered but he expressed himself as feeling a little better. On the 9th he showed marked improvement, sensation had almost entirely returned in the affected leg, but the knee-jerk was still absent in both. The action of the pupils continued normal as at first. On the 10th there was a still further improvement, the patient being able to sit up longer and with less difficulty. From this time forward he made an almost uninterrupted recovery, getting up about the 17th and going out of doors about the 24th.

With regard to the treatment adopted the patient was kept chiefly in a semi-prone position, his left side being the lower, this proving to afford the greatest degree of comfort compatible with the requirements of posture in such a condition. His bowels were kept freely opened with aperients, three grains of calomel being given at the outset. During the first ten days of his illness he was kept on a mixture containing ten grains of iodide of potassium and 40 minims of tincture of hyoscyamus to the ounce taken every four hours. The patient bore the iodide well and at no time experienced any disagreeable symptoms beyond slight nasal catarrh. After the first ten days the dose of the iodide was reduced to half and combined with small doses of strychnine together with aromatic bitters. For the first week he was kept on a complete milk diet, no alcoholic stimulants whatever being allowed. The second week he was permitted the addition of beef-tea, Brand's essence of beef, &c. The third week he was placed on a diet consisting chiefly of fish, eggs, toast, and farinaceous puddings, and so by degrees did he progress to his normal food. He was, however, advised to abstain from all stimulants for some time to come. I last saw the patient on May 10th and he had now quite recovered except that the patellar reflexes, although showing considerable improvement, were still scarcely as brisk as they should be.

As to the diagnosis: taking into consideration the very slight alteration in temperature, the irregular grouping of the symptoms, the spastic condition of the right leg, the early change from hyperæsthesia to total loss of sensation and deep reflexes, together with the subsequent recovery of sensation in the continued absence of those reflexes, all appear when collectively considered to point rather to a localised myelitis than to a spinal meningitis, hæmorrhage into the cord or any of the other conditions which naturally arise in one's mind in such a case. Be this as it may, there seems little reason to doubt that the cause was intimately connected with the conditions under which a comparatively new occupation is conducted, and although I am unprepared to say whether the pathological state produced was the direct outcome of the constant jarring to which a driver of one of these vehicles is exposed or to the excessive muscular effort required of the patient on the particular day on which he developed his malady, the fact of his illness remains and it would be interesting to learn if similar cases have come within the experience of others besides myself.

Oakley-square, N.W.

SOME THROAT AFFECTIONS.[1]

BY W. H. KELSON, M.D. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON AND PATHOLOGIST TO THE LONDON THROAT HOSPITAL.

THE time at my disposal this evening is short and I therefore have selected just a few only of the diseases of the throat, picking out those with which I have found men doing post-graduate work are not familiar and which are often confused with other complaints.

Let us take *mycosis*. A patient, most probably an anæmic young woman; though this disease may occur at all ages and in both sexes, comes complaining of a slight pricking or burning sensation in the throat, or perhaps has felt nothing wrong but while contemplating the beauties of her mouth in the looking-glass has noticed white patches on the fauces. On examination you find these white spots or tufts are most numerous on the crypts of the faucial tonsils but are also often found on the lingual tonsil and have been noticed in Luschka's tonsil and downwards so far as the pyriform fossa and vocal cords. On attempting to remove these spots considerable difficulty will be met with and bleeding is liable to occur but the tissues round about are pale and show no signs of inflammation, differing in these respects from the caseous masses of follicular tonsillitis, with which disease it is often confounded but in which the soft material filling the crypts comes away easily. The symptoms of this complaint may be *nil* and but rarely amount to pain; it is almost essentially a chronic disease, its duration extending generally over years, though in rare cases acute attacks have been recorded accompanied with febrile symptoms. If some of the spots be scraped and the material acidified and stained with iodine in iodide of potassium bundles of threads stained blue are found consisting of the leptothrix buccalis and if sections be made the epithelium will be found to be thickened and horny, and, in fact, a process of keratosis has been going on. As to the relationship of the bacteria to the epithelial changes opposite views are held, some believing the leptothrix to be causative, others only secondary and saprophytic.

As regards treatment some authorities consider this affection harmless and advise that it should be left alone so far as local remedies go, only treating the general health if necessary; the greater number, however, consider that local treatment should be undertaken and of the agents employed salicylic acid, alcohol, formalin, and iodine are some of the favourite ones and the galvano-cautery has been extensively used, but to be successful there must be great perseverance as the disease is exceedingly prone to recur. If the tonsils are much affected and hypertrophied tonsillotomy is the best treatment. The spots have been found to disappear after the habit of smoking tobacco has been contracted.

Vincent's angina.—From time to time one comes across cases of ulceration of the tonsil of a puzzling character. The ulcer is covered with membrane and the appearance is somewhat suggestive of diphtheria and the submaxillary glands are generally enlarged; there is, however, but little constitutional disturbance usually though fatal cases in children have been recorded; sometimes the complaint has been confounded with syphilis and even follicular tonsillitis. The duration of the disease is about from one to ten weeks, on an average three. As regards treatment, applications of iodine have been most successful. On removing a portion of the membrane and staining with methylene blue large numbers of a fusiform bacillus are found and these are

[1] A paper read before the Hunterian Society on Feb. 23th, 1906.

believed to stand in a causal relationship to the disease and are known as Vincent's bacilli.

Streptococcal inflammation of the pharynx is not always easy of diagnosis and one may take as a type erysipelas of the fauces. Unfortunately, in hospital practice one sometimes sees typical cases. The patient has a chill and vomits and complains of sore-throat which, on examination, is found to be dry, shiny, and dark-red. The temperature is raised and the submaxillary glands are swollen, and if the patient should be one on whom a mastoid operation has been performed the next day the disease may be found to have tracked up the Eustachian tube and involved the deeper parts of the wound and thence spread over the neck and face.

Chronic pharyngitis presents some interesting points and it is a curious thing that though the state of the tongue has for ages been looked upon as an index as to the condition of the stomach the same stress has not been laid upon pharyngeal conditions, but woe to the medical man who tries to treat successfully chronic pharyngitis without bearing the digestive organs in mind and most beneficial results are obtained by dieting and medicines, such as nux vomica, dilute mineral acids, bicarbonate of sodium, gentian, the salts of magnesia, rhubarb, &c., and prohibiting or limiting the use of tobacco and alcohol. Under the heading of chronic pharyngitis a large number of different complaints are included and these are both common and troublesome and, in fact, our out-patient departments are full of them, and I am sure it would well repay a worker to investigate them more thoroughly. There is one common form in which the chief symptom is pain, often accompanied by irritation, producing hawking or coughing, and which I think may be well described as aching throat. In this affection swallowing is not painful, just the opposite to acute pharyngitis, but, on the other hand, the pain is relieved by taking food. On examination the pharynx may be dry and glazed, at other times it is granular and sometimes looks normal, but none of these seem to be essential conditions, and though the local appearances may often be improved by paints, caustics, and cautery, yet this affection can seldom be cured by these means, and I am inclined to consider the aching rather of a gouty or rheumatic character; one, of course, must see that the teeth are sound, as no doubt the pain is sometimes of dental origin; also one must remember that nature has intended that air should reach the pharynx only after having been purified, warmed, and moistened by the nose, so that if the latter is blocked or otherwise unable to perform its duties properly the pharynx and larynx suffer.

We are all well acquainted with secondary and tertiary syphilitic affections of the throat but there is a disease closely resembling early secondary syphilis of the fauces which, however, is of a different nature and of which I have from time to time shown cases at the Laryngological Society of London. The chief points about it are as follows: (1) the affection runs a chronic course—generally over a year; it is superficial and leaves no cicatrices and is never vesicular but consists of whitish patches on a red ground; (2) it is more or less symmetrical, affecting the tonsils chiefly and the palate; (3) antisyphilitic remedies have no effect and there is no history or other sign of syphilis to be found after careful examination; and (4) it is accompanied by a good deal of burning pain and sometimes disappears almost and then relapses. Arsenic has appeared to be the most beneficial drug in this disease.

Cavendish-place, W.

THE LENHARTZ TREATMENT OF GASTRIC ULCER AT THE EPPENDORFER KRANKENHAUS, HAMBURG.

BY J. VICTOR HABERMAN, A.B., M.D.

MUCH is being said at present in German professional circles about the Lenhartz treatment of ulcus ventriculi which, though employed at Eppendorf for some years, is comparatively new to the medical world and radical enough to make it a subject for discussion, especially in view of the fact that the results attained at Eppendorf and reports of trials at other German hospitals proclaim it not only theoretically sane but remarkably efficacious in practice.

The dietary treatment generally adhered to in this condition follows the plan based upon the work of Cruveilhier, Ziemssen, Leube, and Fleiner, with slight modifications in various hands, giving the stomach at first complete rest, allowing nothing per mouth save the sucking of ice, especially after a hæmatemesis, and furnishing nourishment by means of rich nutrient enemata. After several days a milk diet is substituted with strict insistence on small quantities at short and regular intervals allowing only after the second or third week 250 grammes, the maximum for every two or three hours and this course continued for from four to six weeks. Occasionally other fluid foods are permitted, some white meat after the fourth week, red meat in the sixth, and finally and with care the gradual addition of vegetables.

At the Congress for Internal Medicine at Wiesbaden in 1901 Professor Lenhartz strongly protested against this "starvation regimen" and suggested a concentrated egg-albumin diet as a more rational method in the treatment of a gastric ulcer, for probably the chief cause of its persistence is the hyperchlorhydria almost invariably present and, as Fleischer has pointed out experimentally and Riegel substantiated clinically, egg albumin is the most efficient food that will "bind" HCl and thus neutralise the existing hyperacidity. In the hyperacidity occurring in nervous disorders a rich albuminous diet has long since been found the most serviceable medication. And similar to the gastric disorder in neurological subjects is that in chlorotic girls—the epigastric distress, the sour regurgitation, the feeling of pressure and pain after eating, and the hyperchlorhydria here also almost invariably present. We are sometimes undecided whether the hyperacidity pure and simple or an ulcer not yet advanced to a bleeding stage lies behind the trouble. Indeed, not only have these symptoms led to the diagnosis of gastric ulcer but only too frequently has a chlorotic condition been the precursor of such. Here, too, the same indications hold good and, in fact, the treatment of chlorosis by means of such a diet, together with the administration of iron, has met with exceptional results and is the one employed at Eppendorf.

From observations made in an extensive practice at Eppendorf (where 10,000 and some odd number of patients were admitted on the medical side in 1905) Lenhartz concluded that many cases of gastric ulcer do not definitely improve, or but very slowly, under the method of entrenched milk feeding; that the high acidity is not measurably lessened; and pre-eminently this, that if patients are brought into the hospital in a poor physical condition consequent upon one or more hæmorrhages, often indeed in collapse, the "starvation treatment"—the ice and nutrient enemata and insufficient milk feeding following—not only maintains the patient in his wretched anæmic state but may even drag him into serious inanition and such an undermined constitution hardly favours the speedy healing of an ulcer. Moreover, frequent nutrient enemata excite the gastro-intestinal tract into peristaltic activity and may thus induce renewed bleeding; beside, very little nutriment is after all obtainable. On the other hand, should more milk be given by mouth, merely enough to preserve the body weight—three litres for an adult—would overfill the stomach and stretch its walls, thus preventing a contraction of the ulcer and again offering the danger of renewed bleeding. Professor Lenhartz therefore sought another dietary treatment, one that would especially combat the hyperchlorhydria and reinforce the enfeebled and anæmic state of the patient, for such reinforcement is imperative in the severe cases, particularly where hæmorrhage has occurred. And so the concentrated egg-albumin diet was tried. In case after case the effect proved so gratifying that this method became the routine hospital treatment. The result of such treatment is that the sour regurgitation subsides, the vomiting immediately ceases, the pain and distress after eating within a few hours to a few days disappear, and finally an increase in the body weight is manifest as early as the first week. Besides, the improvement is comparatively rapid, so that the patient can be dismissed as cured within a briefer time than formerly.

The following is the tabulated regimen at the hospital: Absolute rest in bed for at least four weeks. All mental excitement to be avoided. An icebag is placed upon the stomach and kept there almost continually for two weeks. This prevents gaseous distension, prompts contraction of the stomach walls, thus tending to obviate hæmorrhage, and eases the pain when present. On the first day, *even where a hæmatemesis has occurred*, the patient receives between 200 and 300 cubic centimetres of iced milk given in spoonfuls and from two to four beaten eggs within the first 24 hours. At the same time bismuth subnitras is given twice or

thrice a day, two grammes *pro dosi*, and continued for ten days. The eggs are beaten up entire (with a little sugar) and the cup containing them is placed in a dish filled with ice so that they remain cold. Sometimes a little wine is added. This food at once "binds" the super-secreted acid and therefore mitigates the pain so rapidly and causes the vomiting, often quite troublesome, to cease. The portion of milk is increased daily per 100 cubic centimetres and at the same time one additional egg is given, so that at the end of the first week the patient is receiving 800 cubic centimetres of milk and from six to eight eggs. Both these foods are now continued in the same amount *pro die* for another week. For reasons given above no more than one litre of milk a day is allowed at any time. Besides milk and eggs some raw chopped meat is given from the fourth to the eighth day usually on the sixth, 35 grammes *pro die*, in small divided doses (easily stirred up with the eggs or given alone); the day after 70 grammes, and later possibly more if well digested. The patient is now able to take some rice or "greiesbrei," well cooked, and a few zwieback (softened). In the third week quite a mixed diet is tolerated, the meat being given now well cooked or lightly broiled. All heavy foods are, of course, interdicted as well as vegetables with husks, &c., and those tending to produce flatulence. At the same time the patient is given strict orders to masticate his food thoroughly. The accompanying table gives the daily quantities at a glance.

	Days after last hæmatemesis.													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Eggs*	2	3	4	5	6	7	8	8	8	8	8	8	8	8
Sugar with eggs ... grammes	0	0	20	20	30	30	40	40	50	50	50	50	50	50
Milk ... ... c.c.	200	300	400	500	600	700	800	900	1000	1000	1000	1000	1000	1000
Raw chopped meat grammes	0	0	0	0	0	35	70	70	70	70	70	70	70	70
Milk rice ... ... ,,	0	0	0	0	0	0	100	100	200	200	300	300	300	300
Zwieback ... ... ,,	0	0	0	0	0	0	0	20 = 1 piece.	2 pieces.	2	3	3	4	5
Raw ham ... ... ,,	0	0	0	0	0	0	0	0	0	50	50	50	50	50
Butter ... ... ,,	0	0	0	0	0	0	0	0	0	20	40	40	40	40
Calories	280	420	637	777	956	1135	1588	1721	2138	2478	2941	2941	3007	3073

* From the first to the seventh day inclusively the eggs are beaten; from the seventh to the fourteenth day inclusively half are beaten and half are cooked.

The bowels are not to be moved, both in order to avoid any peristaltic irritation and to permit the reabsorption of blood that may have passed into the intestine. In fact, one need pay absolutely no attention to constipation in the first week, even in many cases to the end of the second. After the second week the bowels are moved with small glycerine injections or warm water, and after the third week this is done daily if a movement does not occur spontaneously. After this one tries to control the bowels by means of the food and by getting the patient to go to stool regularly.

For the anæmia iron is given in the form of a soft preparation of Blaud's pills:

Ferri sulphas, 10.0 grammes.
Magnesia usta, 1.75 grammes.
Glycerinum, gutte, xxx. (3·6 grammes).
Misce et divide in pilulas lx. (Pil. Blaudii Lenhartz.)
2 pills to be taken two or three times a day.

These pills are given as early as the sixth, eighth, or tenth day of treatment according to need, administering them at first in a macerated condition. In severe cases arsenic is also given in the form of "Asiatic pills," each containing 0·001 gramme of arsenious acid. These pills are given in gradually increasing doses: three for three days, four for four days, up to seven for seven days, then decreasing again six for six days, &c. After the tenth day and to the sixth week bismuthum compositum is substituted for the subnitras and given three times a day before meals. The patient is usually allowed up on the twenty-eighth day and is dismissed in the sixth to tenth week.

By this method all patients have been treated in the Eppendorfer Krankenhaus for some five or more years, the treatment being at all times begun *at once*. Before the Lenhartz method was employed the records of 100 cases showed a recurrence of hæmorrhage in 20 per cent. of the patients. In a series of 135 cases with one or more hæmatemeses on, or just prior to, admission such recurrence was noticed in but 8 per cent. of the patients, three of whom had at first been in other hands. Among the 135 cases of Lenhartz there were three deaths, one due to severe anæmia (the blood examination showed but 17 per cent. of hæmoglobin on admission), one on the fifteenth day of treatment due to femoral thrombosis and pulmonary emboli, and one on the twenty-seventh day, the necropsy disclosing five ulcers, one having eroded a duodenal vessel thus occasioning profuse bleeding. This patient had had many hæmorrhages before admission. Of the remaining cases the severest gave the most gratifying results. Those whose blood on admission contained but 35 per cent. of hæmoglobin or under showed an average weekly increase of 7·7 per cent.; those having between 35 per cent. and 60 per cent. an average weekly increase of 6·34 per cent. In 25 cases under my own observation during four months there was an average weekly increase in weight of 1·15 kilogrammes. The majority of patients were dismissed as cured before the eighth week. In no case was it manifest that any unfavourable effects were produced by the treatment. Thus far Minkowski, Albert Fraenkel (Urban, Berlin), Wirsing, and Senator have acknowledged the excellence of the Lenhartz treatment, the last named, however, suggesting some modification.

Eppendorfer Krankenhaus, Hamburg.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. THOMAS'S HOSPITAL.

AN UNUSUAL CASE OF TYPHOID INFECTION.

(Under the care of Dr. HECTOR MACKENZIE and Mr. W. H. BATTLE.)

FOR the notes of the case we are indebted to Dr. Ronald E. G. Gray, late house surgeon to the hospital, and for the bacteriological report to Mr. Leonard S. Dudgeon.

The patient, a man, aged 28 years, was admitted to St. Thomas's Hospital under the care of Dr. Hector Mackenzie on July 7th, 1902, suffering from typhoid fever. The illness commenced seven days before admission with pain in the back and abdomen, headache, and vomiting. On July 11th perforation occurred and after abdominal section a perforation of the ileum was sutured by Mr. W. H. Battle. On and after August 4th the temperature did not rise above 99° F. and convalescence set in. The patient left the hospital on Sept. 10th. On Sept. 18th he was readmitted for pain in the right femur and knee which was treated with iodide of potassium and local applications and he was able to return home in about three weeks. On Oct. 18th, 1904, more than two years after typhoid fever, he was readmitted, complaining that for the previous four weeks he had had pain of a gnawing

character, worse at night, in the lower third of the right femur. Except for some abdominal pain, which followed an injury whilst carrying a sack of coal, he had been quite well in the interval. On admission the lower third of the right femur was uniformly enlarged and extremely tender on pressure. On Nov. 6th an incision was made by Mr. Battle on the outer side of the thigh above the knee. Thickened periosteum was incised and thick yellow pus immediately sprang into the wound. A bacteriological examination of this pus was made by Mr. Dudgeon and typhoid bacilli were found in pure culture. The patient left the hospital on Dec. 21st, 1904, at which time his wound was soundly healed, but a few weeks later a portion of the scar gave way and a small sinus formed from which there was some purulent discharge. He came to the hospital for treatment in the middle of June, 1905. There was a small sinus situated on the outer side of the right thigh leading down to the bone. The patient stated that he applied a dressing daily at his home but the sinus did not appear to make any attempt to close. At his next visit, a fortnight later, he was in great trouble, as his wife had been admitted to the hospital suffering from typhoid fever. She was admitted to Charity Ward under the care of Dr. W. S. Colman with a severe attack of typhoid fever which proved fatal at the height of the disease. The typhoid serum reaction was positive and at the necropsy severe intestinal ulceration and consolidation of the lungs were seen. The patient was asked if his wife had ever dressed his leg for him and he replied that he always dressed it himself but that his wife collected the soiled dressings and burnt them. There was no other illness in the house nor had anyone living near him, so far as he knew, recently had typhoid fever. He was taken to the clinical laboratory and a bacteriological examination of the sinus was made by Mr. Dudgeon whose report is given below.

Bacteriological report.—At the examination made in July, 1905, of the pus obtained from the sinus typical blue colonies appeared on the medium of Drigalski and Conradi, which had been inoculated with the pus, and from these colonies pure strains of the typhoid bacillus were obtained. The bacillus also gave the cultural characters of the typhoid organism in urotropin broth. The patient's serum failed to agglutinate this bacillus but a complete typhoid reaction was obtained with a standard laboratory strain of positive typhoid serum and the bacillus isolated from the patient's leg, while typhoid horse serum also gave a complete instantaneous reaction with the bacillus in a dilution of 1 in 1000. On Dec. 9th the pus obtained from the right femur was again examined with a similar result.

As the sinus persisted Mr. Battle, on Feb. 16th, 1906, made an incision over the old scar down to the femur. The periosteum was rough and thickened and this was divided. There was a cavity in the interior of the bone which was scraped out, several small pieces of bone being removed. The wound was syringed out with saline solution. A culture taken at the time of operation showed the presence of the typhoid bacillus. Subsequently the wound was irrigated daily with 1 per cent. urotropin[1] and after a few days the discharge was found to contain no typhoid bacilli; at the end of March a second examination was made with a similar result.

Remarks by Mr. DUDGEON and Dr. GRAY.—For some years it has been well recognised that the bone complications of enteric fever are due, in a majority of the cases, directly to the bacillus typhosus, but sufficient stress does not seem to have been laid upon the danger that these cases may be to the community at large. At a London hospital, where the demand upon the beds is necessarily enormous, a number of cases of suppurative bone disease have to be discharged before their wounds have completely healed and have to attend for weeks or even months as out-patients. The importance, therefore, of making a careful bacteriological examination in all cases which may possibly be due to typhoid fever, both at the time of operation and before the patient leaves the hospital, cannot be exaggerated. It should be mentioned that when the patient left the hospital his wounds were completely healed and that the sinus did not develop till some weeks later. His past history is taken from articles published in THE LANCET by Dr. Mackenzie[2] and Mr. Battle with Mr. Dudgeon.[3]

[1] One of us (L.S.D.) has recently read a communication before the Pathological Society of London in which it was shown that typhoid bacilli will not grow in 1 per cent. urotropin broth.

[2] THE LANCET, Sept. 26th, 1903, p. 869.

[3] THE LANCET, April 22nd, 1905, p. 1065.

Although, of course, it is impossible to say for certain, yet it seems extremely probable that the wife was infected with the typhoid bacillus by her husband and we believe that only one case of a similar kind has been published (the reference to this we are unable to find). Considering the myriads of typhoid bacilli that his wound must have poured out daily it seems strange that she should have escaped for so long a time. As a rule the specific bacilli die out shortly after surgical interference but references are given by Keen[4] to cases, similar to the present one, in which typhoid bacilli were present in chronic sinuses of some years' duration.

ANCOATS HOSPITAL, MANCHESTER.

THREE CASES OF PANCREATIC DISEASE.

(Under the care of Dr. A. J. RODOCANACHI.)

FOR the notes of the cases we are indebted to Mr. G. Wright, house surgeon.

CASE 1.—The patient was a woman who had been ailing and had lost much flesh during the preceding three months. She was sent into hospital as a case of perforated gastric ulcer on April 20th, 1904. After admission she vomited a quart of green bilious fluid. There was resistance in the right upper quadrant of the abdomen. A large quantity of putty-like fæces was removed from the rectum. The case was considered to be a not very acute intestinal obstruction and so a laparotomy above the umbilicus was performed on the 22nd. The stomach, which was much dilated, was found to fill three-quarters of the abdominal cavity, while the small and large intestines were collapsed. General matting of the surrounding organs by adhesions obstructed the pylorus. A posterior gastro-enterostomy was therefore performed and the abdomen was closed. The gall-bladder which was seen to be enlarged, was not opened at the operation. The vomiting ceased but two days later the temperature rose to 102° F. and on the 26th the patient died.

Post mortem the gastro-enterostomy was found to be holding perfectly well. There was no peritonitis. There were two stones in the gall-bladder. The pancreas was very hard and the pathologist reported that on microscopic examination it showed chronic interstitial pancreatitis.

CASE 2.—The patient was a man, aged 48 years, who had suffered from attacks of biliary colic for the last ten years. An attack had begun six weeks before admission with severe pain, shivering, and sweating, followed on the next day by jaundice which persisted for a week. With the onset of the jaundice the pain subsided and the patient resumed work. Three weeks later he had a similar attack during which the jaundice persisted until a few days before admission and the pain never left him unless he was under the influence of morphine. He vomited often and freely. The operation was performed on April 18th, 1905, through Mayo Robson's incision. Adhesions round the gall-bladder were separated and on opening it some viscid bile and 322 stones were removed. The ducts were palpated but no stones were felt in them. A tube was fixed into the gall-bladder and the abdominal wound was sutured round it. After the operation the pain was in no way relieved and vomiting of fluid like beef-tea set in. The stomach was washed out and calomel was given, while morphine was injected subcutaneously but only temporary relief was obtained and the patient died from exhaustion on the 24th.

Post mortem there was no peritonitis. Fat necrosis was noticed in the small omentum and on examining the pancreas the head was found to be much enlarged. Cutting into it a large cyst containing broken-down blood clot was opened. It was of about the size of a Jaffa orange and occupied the head of the pancreas. The pancreatic tissue surrounding the cyst was about half an inch thick, very dense and fibrous. No stones were present in any of the bile ducts.

CASE 3.—The patient, a man, aged 45 years, had had several attacks of biliary colic during the preceding two years. The present illness began on June 7th, 1905, with severe pain in the epigastrium which was relieved by morphine but returned each time the effect of the morphine had passed off. He was admitted to hospital on June 14th and there was then general distension of the abdomen, especially in the upper zone. There was an ill-defined mass

[4] Surgical Complications and Sequels of Typhoid Fever, 1889.

to the right of the middle line and extending downwards half way to the umbilicus; this was resonant on percussion and showed communicated pulsation from the aorta. On the same day the abdomen was opened by a median incision. The omentum was found thickened and rolled up so as to form the above-mentioned swelling. Numerous areas of fat necrosis were present in it. The gastro-hepatic omentum was pierced and the lesser sac opened displaying a small cyst in the head of the pancreas. This was opened and one or two ounces of dark altered blood escaped. The cyst was then packed with gauze and drained. The gall-bladder was then opened and eight small stones were removed. The gall-bladder also was drained and the remainder of the abdominal wound was closed. The operation was followed by much shock, restlessness, and delirium, and the patient died early on the next day.

Post mortem the bile ducts were free from stones. The pancreas was found much infiltrated with blood clot. Microscopically the head of the pancreas showed advanced chronic pancreatitis with much formation of fibrous tissue; the rest was infiltrated with recent blood clot.

Remarks by Dr. RODOCANACHI.—It will be noticed that the first two cases were not recognised as pancreatic disease during life, though the character of the fæces in the first and the persistent pain in the second might have given a clue to the correct diagnosis. The third was diagnosed before operation, inasmuch as the mass resonant in front and communicating pulsation from the aorta behind must be in the situation of the pancreas or the small sac of peritoneum. The diagnosis was confirmed at the operation, when the fat necrosis was seen. In all three cases gall-stones were present and might be taken as evidence of the infection of the biliary and pancreatic passages. Death was probably inevitable considering the advanced state of the pancreatic disease, and the best chance of recovery was given by free drainage of the passages through the gall-bladder, together with removal of the gall-stones. Such cases point to the necessity of removing gall-stones and draining the gall-bladder, if possible, before pancreatic infection has occurred.

Medical Societies.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—An extra-metropolitan meeting of this society was held on June 23rd in the medical department of the University of Leeds.—The President, Mr. A. E. Cumberbatch, was in the chair and numerous cases and specimens of interest were shown by the Leeds members, Mr. H. Secker Walker and Mr. A. L. Whitehead. Amongst the former was a young girl, aged 14 years, who had been practically educated as a deaf-mute by lip-reading, &c., after an attack of influenza at an early age. This year she had been put under treatment by inflation and had enormously improved.—In the discussion which followed it was pointed out that many so-called deaf-mutes were amenable to treatment and more careful examinations by skilled otologists were urged upon schools devoted to aural deficients.—Among the papers read were Some Points in the Diagnosis of the Complications of Temporal Bone Disease based upon a study of 135 fatal cases, by Mr. Whitehead, and the Influence of Pregnancy and Parturition upon Certain Forms of Progressive Deafness, by Dr. W. Milligan. In his paper the latter struck an important and valuable note. He pointed out the disastrous effects of child-bearing upon women who were deaf, and especially upon those with a family history of deafness. He questioned whether such people should be allowed to marry.—Mr. P. M. Yearsley, in discussing this paper, drew attention to the fact that it was rather post-parturition conditions, especially lactation, that were to blame and suggested that a careful investigation of such cases by means of blood counts might be of value.—The members of the society were afterwards entertained by Mr. Walker, Mr. Whitehead, and Mr. Michael A. Teale at luncheon at the Queen's Hotel.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held on June 27th, Dr. Alfred Eddowes, Vice-President, being in the chair.—Mr. G. W. Dawson showed: 1. A man with a Peculiar Thickening of the Terminal Phalanx of the Left Thumb which was said to have started as an eczema. The bone itself was normal as seen by the x rays. 2. A woman, aged 46 years, with Lupus Erythematosus of the Face and Dorsal Surfaces of the Fingers, quite symmetrical in its distribution. 3. A man with Acne Varioloformis of the Scalp.—Dr. Eddowes showed a case of Acute Lupus Erythematosus of the Face in a woman. The lesions themselves were raised and œdematous and there was evidence that the condition was spreading further outward upon the left cheek.—Mr. T. J. P. Hartigan showed: 1. A girl with a Peculiar Eruption around the Nose of 14 years' duration. No member of the society would venture upon a diagnosis of this case. 2. A man with a Vesicular Eruption of the Limbs, symmetrical in its distribution, having some resemblance to a varioloid syphilide. 3. A young man with Darier's Disease and also coloured drawings of this disease taken from this patient and from a girl previously exhibited before the society. 4. An infant with Urticaria Pigmentosa. 5. A young woman with a curious Acneiform Eruption upon the Face and Trunk. From many of the papules small sebaceous plugs had been observed to extrude. The condition was in all probability that of keratosis follicularis contagiosa (Brooke).—Dr. E. G. Graham Little showed: 1. A young woman with Koilonychia or "Spoon-nail." 2. A little girl with a Tuberculide affecting the Lower Limbs, upon which numerous pitted scars could be seen, the results of older lesions. There were no evidences of tuberculosis elsewhere.

Reviews and Notices of Books.

Text-book of Anatomy. Edited by D. J. CUNNINGHAM, F.R.S., Professor of Anatomy, University of Edinburgh. Illustrated with 936 wood engravings from original drawings, mostly printed in colours. Second and revised edition. London and Edinburgh: Young J. Pentland. 1906. Pp. 1388. Price 31*s.* 6*d.* net.

THE first edition of Professor Cunningham's text-book met with a very favourable reception and at once made a place for itself among the text-books in common use. Over three years have elapsed since that edition appeared so that those engaged in teaching anatomy have had ample time to find out the merits and the defects of the work. By common consent the most satisfactory sections of the book were admitted to be those devoted to the nervous system, the digestive system, the respiratory system, and embryology. Appropriately enough two of these sections are associated with the name of the editor. In the new edition the list of contributors remains unaltered but the lamented death of Professor A. Birmingham, who as an exponent of visceral anatomy had few equals, rendered it necessary for the editor to revise the section on the digestive system himself. With these preliminary remarks we will proceed to give our impressions of the various sections of the work as it now appears.

First as to embryology, with which the names of Professor A. H. Young and Professor Arthur Thomson are associated. This, which was a very satisfactory feature of the first edition, has been brought up to date and new diagrams in several instances have been inserted. The section on osteology has been greatly improved by the omission of the coloured markings of muscular attachments. We do not say this because we think that these markings subserve no useful purpose; on the contrary, we think that they are of great value to the student but unfortunately in the last edition they were anything but accurate. It is also easy to see how the addition of the coloured outlines detracted from artistic appearance of the drawings of the bones. A new set of the illustrations of the muscular attachments, much more in accord with nature, is found in the section on myology. Reproductions of some radiograms have been added to show the ossific centres of the hand and the foot.

In the former edition the section on arthrology was certainly weak and although it still is rather brief yet we are glad to see that the old illustrations have been largely replaced by a more satisfactory series of drawings on a larger

scale. The adoption of colour printing has improved the appearance of the section on myology. The new illustrations of muscular attachments, which have been prepared by Dr. E. B. Jamieson, we have already referred to. The tables of nerve-supply and of muscular action remain as before. Considering the growing importance of a knowledge of the action of muscles it is a pity that more attention has not been paid to this: the account being tabular is very meagre and might be supplemented considerably. There was but little occasion for alteration in the account of the central nervous system. This was one of the strong points of the first edition, so much so that complaint was made of over-elaboration in this direction. With this criticism we cannot concur and we have many times appreciated the editor's able and lucid exposition of a difficult subject. At the same time we do feel that the introduction of a few simple diagrams showing the continuity of the long motor and sensory tracts and their relative positions at various levels of the cerebro-spinal axis would be of advantage to the student. We notice that new diagrams of the tracts in the posterior columns of the spinal cord appear and the development of the cerebellum is further illustrated. In Fig. 417, which shows the central connexions of the lower cranial nerves, the sixth nerve and its nucleus have been unaccountably omitted. The membranes of the brain hardly receive the attention which their importance merits. Diagrams of the positions and communications of the various spaces might be supplied. The descriptions of the organs of sense and of the vascular system call for little comment but it would materially add to the usefulness of the description of the lymphatics could some diagrams be devised to show the lymphatic areas of the head, the areas and drainage routes of the breasts, and also those of the stomach, the liver, the uterus and annexa, the penis and perineum. Another weak point is the description of the various bursæ. Illustration of these is not difficult and on turning to the index we find that the various sacs are not mentioned by name, so that it is a matter of difficulty to trace them. The section on the digestive system we have already commended.

In various places in the book we find references to the pancreatico-gastric and pancreatico-duodenal folds but can find no formal description of these important structures. In the section on the urogenital system several new and important drawings appear, including new representations of the prostate. The editor and his assistants do not appear to have made up their minds which is the sheath of the prostate and which is its capsule; this is evident on comparing the account in this section with the one given in the section on surgical anatomy.

We have criticised a few points in which we think improvement might be effected. Taken as a whole the book is a trustworthy and lucid guide to the subject of which it treats and may be unhesitatingly recommended both to the beginner and to the advanced student. It will long continue to hold a prominent place amongst English text-books.

Diseases of the Rectum, being a short account of the Symptoms, Diagnosis, and Treatment of some Diseases affecting the Anorectal Region. By F. VICTOR MILWARD, M.B., B.C. Cantab., F.R.C.S. Eng., Surgical Casualty Officer, General Hospital, Birmingham; Surgeon to Out-patients, Children's Hospital, Birmingham. With 27 illustrations, eight of which are original, and have been drawn by the author. Birmingham: Cornish Brothers, Limited. 1906. Pp. 193. Price 5*s.* net.

FOR its size this is a very complete account of the diseases of the rectum and we do not know any work more suitable for a medical man to read if he wishes to refresh his knowledge of the diseases of this portion of the body. The author is wise in not attempting to give too much but what he gives is good. The advice as to treatment is judicious. Especially valuable is the chapter devoted to the consideration of the value of operative procedures in rectal carcinoma, for there are few subjects about which more diverse opinions are expressed. Mr. Milward considers that of 100 cases of malignant disease of the rectum from 20 to 25 will be suitable for excision, from 55 to 60 will benefit by immediate colostomy, and of the remaining 20 15 will eventually require it. Thus in about 5 per cent. of cases no operation is advisable. With these figures we agree on the whole. By the bye, we are glad to see that Mr. Milward uses the term colostomy for an artificial anus in the colon. The word colotomy should be reserved for incision of the large intestine.

Gall-stones and their Surgical Treatment. By B. G. A. MOYNIHAN, M S. Lond., F.R.C.S. Eng. Second edition, revised and enlarged. London and Philadelphia: W. B. Saunders and Co. 1905. Pp. 458. Price 21*s.* net.

IN the spring of 1904 Mr. Moynihan delivered a course of lectures on gall-stones at the Medical Graduates' College, London, and this book contains the material on which those lectures were based. The first edition appeared in 1904 and was rapidly exhausted so that a new edition has become necessary. There was a very clear need for the publication of a book such as this, for the accounts of gall-stones and the surgery resulting from them given in the ordinary text-books, or even in works specially dealing with the liver, are too brief to be of much practical value. Mr. Moynihan has the happy faculty of writing very readable books and the present volume is no exception to this rule. The use of adequate illustrations is always a great aid to comprehension and the illustrations here are very good. There is naturally in a large book much on which criticism might be based but we will confine ourselves to a few points. Mr. Moynihan, as do most surgeons at the present time, supports "Courvoisier's law," that "in chronic jaundice due to blocking of the common duct a contraction of the gall bladder signifies that the obstruction is due to stone, a dilatation of the gall-bladder that it is due to causes other than stone." We agree that the exceptions to this law are very few but exceptions do occur. In a work of this character we think that it would be well to give the sources for the references and quotations that are made, so that the reader may, if he will, refer to the original book or article. We may also suggest that in a future edition the two indices which are present, one of names of persons and the other of things, should be combined. It is now generally agreed that a single index is more valuable and more easy to use than two or more distinct indices. The book is well printed in a large readable type.

LIBRARY TABLE.

Personal Hygiene, Designed for Undergraduates. By ALFRED A. WOODHULL, A.M., M.D., LL.D. (Princ.), Brigadier-General U.S. Army (retired), &c. London: Chapman and Hall, Limited. New York: John Wiley and Sons. 1906. Pp. 221. Price 4*s.* 6*d.* net.—This little book, we learn from the preface, "is intended for undergraduate students and contains the substance of lectures on Personal Hygiene given at Princeton." The first seven chapters are devoted to a brief account of the anatomy and physiology of the human body. This is followed by chapters on the development and care of the body, on physical culture exercises, on fatigue, on elimination of waste and care of the skin, on catching cold, and on clothing. The last three chapters are devoted to the subjects of food, tobacco, and alcohol. On the whole, the first portion of the book is the least satisfactory, as the account given of the structure of the body is too meagre to be of much value, while

in the absence of any illustrations it is doubtful whether a reader unacquainted with anatomy would be much the wiser for a perusal of it. The advice given in the more practical portion of the book is generally sound and useful. On the burning questions of alcohol and tobacco the author is no fanatic. He admits that alcohol is to some extent a food, though not a good form of food under ordinary conditions, and he insists upon its value in many diseased conditions—a truth which is often denied by the teetotal extremists. The harmfulness of tobacco to growing youths is rightly insisted upon. The style of the book is interesting and it is free for the most part from distressing perversions of the English language. A study of it may well be recommended to the undergraduate readers for whom it is intended, if it is possible to persuade young people at that period of life to attend to such a dull and trivial subject as the preservation of health.

Food in Health and Disease. By H. DRINKWATER, M.D. Edin., with a preface by T. R. BRADSHAW, M.D. Dub., F.R.C.P. Lond. The Temple Primers. London: J. M. Dent and Co. Pp. 174. Price 1*s.* net.—In compiling this primer Dr. Drinkwater is chiefly indebted to the works of Bauer, Cheadle, Chittenden, Hutchison, Roberts, Sir H. Thompson, Williams, and Yeo. In the preface Dr. Bradshaw points out that popular estimation is not a safe guide as to the nutritive value of the various articles submitted to us as food, and, further, that it is necessary to know what modifications are needed in the diet to meet the wants of the human organism at different periods of life, under various conditions of climate and season, and in various states of disease. For those who are studying medicine a scientific and practical knowledge of dietetics is indispensable. Professor Herter of New York, in his admirable lectures on chemical pathology, strongly advises medical students to inform themselves as fully as possible in regard to the chemical and physiological characters of the ordinary articles of food. Still more emphatically he urges them to obtain a practical knowledge of cooking. Dr. Drinkwater has an extensive knowledge of the theory of diet both in health and disease and Dr. Bradshaw writes that he has had good opportunities of testing the correctness of his views in practice. His book should be helpful both to the members of our profession and to the general public. The book treats of the different kinds of food, of cooking, of the digestion and absorption of food, of the force value of food, of food in infancy, during school life, and in old age, of the cost of food, and of food in disease. In an appendix the author gives an epitome of the observations of Professor Chittenden of Yale University on the subject of the necessary amount of albuminous food-stuffs for men under various conditions as to work and exercise, which are set forth in his work entitled "Physiological Economy in Nutrition." A bibliography and an index are included in this little volume.

Outlines of Zoology. By Professor ARTHUR THOMSON, M.A. Fourth edition. London and Edinburgh: Y. J. Pentland. 1906. Pp. 866.—It is interesting to observe that this, the fourth, edition of Professor Thomson's well-known manual is more than 200 pages larger than the first edition published in 1892. The 14 years which have separated the two editions have been so fruitful in zoological discovery that the author's difficulty was not so much in the way of critical revision as in planning how to accommodate insistent new fact. This he has done by being liberal in small type and chary of admitting any but the facts of quite first-rate importance into large type; otherwise a process of budding or fission into two volumes would have been inevitable. This fourth edition contrasts favourably in more than one feature with the work as it was originally printed. The rather coarse plates of the earlier edition have been replaced by much better illustrations in the text. Some of the latter are new in the sense that they have not yet, so far as we are aware, found their way into any text-book from their native element—the pages of a special memoir. This is the case, for example, with the figure of the brain of hatteria, which serves to show how unnecessary an order rhynchocephalia is to include this essentially lacertilian reptile. The brain is one of the many features in which hatteria betrays its affinities and which forbids its comparison with any other group of reptiles, that is a comparison in which the lacertilia generally do not share. The general facts of zoology must be as familiar to Professor Thomson after some years of teaching as they are to others. And we find, therefore, a lack of error in detail which is satisfactory and renders the book trustworthy to the student. Criticism of this manual, indeed, is necessarily confined to minutiæ. We object, for instance, to the author's statement when dealing with the anatomy of the lacertilia embodied in the phrase "the epigastric or anterior abdominal vein." It is just as well to retain for the large and important vein which joins the portal anteriorly and communicates posteriorly with the pelvic veins the latter of the two appellations offered to us by Professor Thomson and to reserve for a delicate vein which courses along the ventral body wall below this the name of epigastric. Professor Thomson is liable to fall into a kind of inaccuracy so common among writers of text-books as to be characteristic of them—an inaccuracy of implication. He writes, for example: "In some lizards (chameleons and geckos) the lungs are prolonged into air sacs." This kind of statement, and for the matter of that this actual statement, is to be met with frequently in text-books and is a loose way of stating that in the groups in question the structure mentioned does occur. But it implies something that is not true—i.e., that all the members of the groups are thus characterised. Again, in describing the prototheria, the author writes that "the right auriculo-ventricular valve in ornithorhynchus is partly muscular as in birds, while in other mammals it is membranous." This statement is true so far as it goes; but as the section deals not only with ornithorhynchus but also with echidna—for both are prototheria—the implication is that echidna agrees with "other mammals," which is not the case. However, this mode of statement is not so seriously to be found fault with as sheer error of description; and of this we find nothing in Professor Thomson's useful manual.

Darwinism and the Problems of Life: A Study of Familiar Animal Life. By CONRAD GUENTHER, Ph.D., Professor at the University of Freiburg in Baden. Translated from the third edition by JOSEPH MCCABE. London: A. Owen and Co. 1906. Pp. 436. Price 12*s.* 6*d.*—This book will appeal to all educated people who take an interest in scientific questions and who wish to inform themselves as to the actual condition of the theories of life. The greater part of the work is devoted to proving the truth of Darwinism. Every care has been taken to distinguish between facts and probabilities and the deductions which may or may not be drawn from Darwinism are clearly pointed out. The manner in which the book is written is simple because it is intended for the general reader; no knowledge of science is presupposed. The reader is briefly informed on all questions that have a bearing on the theory of evolution: the book gradually educates the reader to grapple with difficult problems—starting from familiar objects it leads on, almost unconsciously, to questions of increasing difficulty, until the reader is at length in a position to form an opinion on even the most complex. The author's scheme is that Nature herself shall teach the reader the truth of evolution; the principles of natural selection are progressively illustrated by facts taken from animal life. As

the translator writes, "The quantity of popular evolutionary literature in our tongue is—apart from works that deal with the subject in its relation to religious controversy—so slight that a fresh work of acknowledged competence should be assured of a welcome. Professor Guenther's work has an especial title to consideration. He has succeeded so well in taking up the position of the average untrained observer for his instructive survey of our animal world that his book will be singularly helpful to thousands who shrink from the usual technical manual." The long introduction is most pleasant and instructive reading and the subsequent chapters pass in review the chief groups of the animal world. Chapter XI. deals with "The Mechanical Conception of Life and its Limits." The author writes: "Natural selection will then modify organisms in the direction of greater simplicity. In our view of the development of the earth there will really be such a time one day. The water on our planet is constantly decreasing, and the time will come when there will not be sufficient left to support human life when the bones of the last man will bleach in the unclouded glare of the sun. But in the last drops that will linger in holes in the vast desert of the earth there will certainly be infusoria. After a time even these creatures will not find water enough; they will perish, and only simpler organisms still will be maintained, until at last all living matter has returned to its mother and changes into lifeless mineral once more." The book will no doubt secure a wide popularity, since it discusses the question with the exactness which science demands and in the light of the most recent research, and at the same time invests the story with something of the charm of a romance; it is not only adapted to the general reader but it also offers the student of evolution a thorough survey of the literature of the subject and is quite up to date. Mr. McCabe's translation is an excellent one, the book is full of charming writing and he is to be congratulated on its appearance. There is a copious index. We think that it would be difficult to find a more suitable and attractive interpretation of evolution, from Weismann's point of view, than is to be found in Professor Guenther's "Darwinism" as given to us by Mr. McCabe.

The Rise and Fall of Reading Abbey. By JAMIESON B. HURRY, M.D. Cantab. With illustrations. London: Elliot Stock. 1906. Pp. 119. Price 2*s.* 6*d.* net.—This book is a reprint, somewhat amplified, of the author's presidential address to the Reading Literary and Scientific Society last year. Dr. Hurry has also published a larger work entitled "Reading Abbey" which contains fuller details than the present work as well as bibliographical references. In the year 1121 eight black-robed monks left their old home, the splendid and wealthy Benedictine Abbey of Cluny, at the bidding of Henry Beauclerc, to raise a great new monastery to the glory of God. The author tells us about the founding of the abbey, the details of its fabric, and a good deal about its abbots and monks; then he passes on to the storm which overtook the religious houses under Henry VIII. and relates the dramatic martyrdom of the last abbot, and then finally tells the present condition of the ruins. The book contains a chronological list of the abbots and a calendar of the abbey. We congratulate the author on the interesting study of his leisure hours. The book shows a sound knowledge and much careful research. It will no doubt be much appreciated by many lovers of local lore and of antiquarian scholarship. The illustrations are very appro priate and they are well executed.

JOURNALS AND MAGAZINES.

Dublin Journal of Medical Science.—The most important communication in the May number of this journal is that by Dr. J. M. Finny on a case of Bradycardia with Arrhythmia and Epileptiform Seizures. In this instance it was possible to verify by means of the x rays the independent beating of the auricles between the ventricular pulsations, thus confirming the theory of heart-block as the cause of this condition. The epileptiform attacks coincided with periods of irregularity in the pulse. Dr. T. Gillman Moorhead records a case of Splenic Anæmia in an Infant and Dr. George B. McCaul writes in favour of Intubation in Diphtheria. An appreciation of Franz Joseph Gall, the founder of our knowledge of cerebral localisation, written by Dr. John Knott, tends to redeem the memory of a great scientific observer from the stain of charlatanism with which it has been unjustly smirched and suggests that the speech centre should be associated with Gall rather than with Broca.

Birmingham Medical Review (May).—Dr. Smallwood Savage contributes an interesting study of Hæmatoma of the Ovary, classifying the varieties of this condition as hæmatomas of the Graafian follicle and of the corpus luteum respectively. Dr. James Miller discusses the Etiology of Coryza, or the common "cold," and tends to regard the staphylococcus pyogenes albus as the causal agent, chill in the form of a draught of cold air causing temporary constriction of the vessels of the nasal mucosa and thus giving the bacteria a chance to invade the tissues.

Ophthalmology. Edited by H. VON WÜRDEMANN, M.D. Vol. II., No. 3. Editorial and publishing office: Milwaukee, Wisconsin, U.S.A. Price per number, 6*s.*; per year, £1 1*s.*—This number of *Ophthalmology* contains a good portrait of Swan M. Burnett, M.D., a well-known American ophthalmologist who died at his home in Washington on Jan. 18th, 1906, at the age of 58 years. His attention was particularly directed to the subject of refraction and he wrote a valuable work on astigmatism and contributed many articles to American journals. Amongst the original articles in this number of the journal are: 1. The Relation of Convergence to Accommodation, by Howard F. Hansell, M.D., of Philadelphia. 2. A case of Atypical Exophthalmic Goitre from Endothelioma of the Pituitary and Thyroid Bodies; Death from General Sepsis; Autopsy, with 13 illustrations in the text, by H. von Würdemann, M.D., of Milwaukee, and Wilhelm Becker, M.D., of Milwaukee. 3. Report of a case of Cystic Degeneration of the Pituitary Body, with Pressure on the Optic Chiasm, by W. H. Peck, M.D., of Chicago. 4. Traumatic Iridocyclitis, with peculiar Conjunctival Disease; Recovery under Injections of Tuberculin, by S. D. Risley, A.M., M.D., of Philadelphia. 5. A second case of Keratitis Disciformis, with report of a case of Corneal Erosion, by W. Campbell Posey, M.D., of Philadelphia. 6. A case of Filamentous Keratitis, illustrated, by William Zentmayer, M.D., of Philadelphia, and H. C. Goldberg, M.D., of Philadelphia. 7. Dangers of Common Drugs, as seen by an Ophthalmologist, by Edmund E. Blauuw, M.D., of Buffalo. There are, in addition, numerous abstracts of current literature and reviews of books.

New Inventions.

A NEW CRUTCH BED-REST.

THE ordinary form of bed-rest has the disadvantage of allowing the patient to slip from the position in which he or she has been placed, however carefully propped up by the nurse with pillows. In the Claxton crutch bed-rest, the object of which is to prevent the patient from slipping after being placed in position, a semicircular padded crutch is placed under each armpit of the patient and screwed to the sides of the bed-rest. By means of adjustable screws the crutches can be easily raised or lowered to any height required and also to the width of the patient's back. The price per pair of the crutches is £2 2*s.* and they can be obtained of the inventor, A. Claxton, 62, Strand, London, W.C.

THE LANCET.

LONDON: SATURDAY, JULY 7, 1906.

The Metropolitan Hospital Sunday Fund.

SOME little time has passed since the day selected for the annual collection on behalf of the Metropolitan Hospital Sunday Fund and the returns which have been made will have enabled individual congregations to congratulate themselves upon such increase as may be observable in the offertories to which they have contributed, or to deplore, in some instances, a falling off. In the majority of cases the figures will be found to be not very different from those of last year, particularly in those not affected by the vagaries of fashion, such as the increasing popularity of excursions out of London at the close of the week. It will also be borne in mind when differences occur that in congregations where the annual sum may be expected to amount to something less than £50 the presence or the absence of a single donor whose anonymous generosity is conveyed in bank notes is likely to make itself felt in a marked degree. We again express the hope to which we have given utterance before, that those who for any reason have not been present to be reminded by the words of the preacher or by our supplement lying before them will not have allowed themselves to forget the needs of the suffering poor and that others will have remembered that the poor treated in the hospitals to which the Fund grants aid are not drawn from areas limited according to the situation of the individual institution, but that they come from all parts of this vast metropolis, from its ever-increasing suburbs, and in many instances from distant parts of the country. It is to the poor of all nationalities and of all creeds that the hospitals hold out helping hands and to whom, in the words of Prebendary M'CORMICK quoted in our supplement, "they save untold pain, they remedy distressing defects, they give hope and life when despair sets in and death threatens," and it is to an equally widely distributed almsgiving public that the metropolitan hospitals look for pecuniary assistance. The document referred to, the supplement published annually by THE LANCET in aid of the Metropolitan Hospital Sunday Fund, contained this year extracts from letters written by clergymen and ministers whose congregations contribute annually. Only small portions could be inserted owing to the limited space at our command but the response made to the request for opinions upon the work done by our hospitals and kindred institutions was of considerable interest, the most prominent points to be observed with regard to it being the varieties of religious belief represented by the writers and their unanimity with regard to the topic upon which they wrote.

In the ordinary course of events within 12 months time we shall again be addressing our readers, or rather a circle of readers extending far outside the limits of the profession of medicine, and shall be urging upon them the necessity not only of maintaining their subscriptions to the Metropolitan Hospital Sunday Fund at their usual high level but of increasing them so that in a proportionate degree the beneficence of the hospitals may be augmented and extended. If they are indifferent in the matter or if they are insufficiently informed as to what that beneficence is we would now suggest that during the coming year they should take steps to secure fuller information on the subject. Hospitals are busy places where the good work must necessarily be done without spectators for the most part, but nevertheless there are occasions when hospitals may be visited without interfering with their routine and none need miss the opportunity, should they seek it seriously, of ascertaining from some humble member of the poorer classes what the hospital has done for him or her. The hospitals have nothing to lose by investigation and inquiry. On the contrary, the wider the knowledge is extended of what is achieved within their walls the wider and the deeper will be the sympathy with their aims and with the difficulties under which those aims are pursued. These difficulties are mainly financial and they arise from causes which are wholly beyond the control of any hospital committee and which show no sign of diminution or of becoming less active in their operation. We will refer once more briefly to those causes because we have suggested that again next year we shall plead on behalf of the hospitals and because we shall of necessity be compelled to refer to their need as one which is increasing and which is not likely to be diminished. Not many days ago London was startled and many were no doubt alarmed by a very serious accident accompanied by death or injury to many persons and caused by an electric tramcar becoming unmanageable upon a steep gradient. No doubt those who read accounts of the accident in the newspapers reflected that the wounded were conveyed to hospitals in the immediate neighbourhood of the disaster and they, perhaps, thought for a moment how useful hospitals may be in such emergencies. Few, however, we believe, will have considered the work of the hospitals in such a case as this, looking upon it in the light of all the circumstances which tend to increase the strain upon the hospitals' resources. We would therefore point out that this was an occurrence due to an application of electricity which, at a very moderate distance of time, say 40 years ago, had no existence, that there was a collision with a motor omnibus, a vehicle which far more recently would have been regarded as a would-be inventor's dream; and that these vehicles were running through busy and crowded streets where 40 years ago country carts went their peaceful way along what were practically country roads, going under Highgate Arch, a structure now wholly passed away and replaced by an example of more modern engineering. All around the spot where the accident took place stand thousands of buildings, many of them inhabited by the poorer classes, occupying what were green fields 40 years ago, and the thoroughfares lead into other like districts, many of them equally populous but still more recently occupied. We have here examples of modern scientific progress in the methods of locomotion having as their equivalents in the hospital

all the costly apparatus and equipment, all the improvements of building and sanitation, which necessitate annually a fresh and an increasing expenditure. We have also an instance of the expansion of London and of the increase of the population which seeks to earn its scanty living in and around the great metropolis and which, when disabled by illness or injury, must depend upon the hospital for treatment. We have, moreover, a reminder that the inventions of science, the increase of commercial enterprise, and the multiplication of objects upon which the energy of workers may be expended do not make human life safer or more free from sudden and unexpected danger than it was in the more tranquil times when our older hospitals were founded by wise and benevolent citizens. We have, in short, a combination of examples of the changes which time brings and with which the hospitals must struggle to keep pace if they would maintain their proud position in our social economy. The London of 40 years ago which those who do not yet reckon themselves elderly can well remember was widely different from the London of to-day and the progress which has taken place has been so rapid that any corresponding increase in the fixed resources of the hospitals has been impossible, so that they have to face the growing demand for their aid by asking for more liberal contributions from the benevolent public from year to year. We may, therefore, without anticipating what may be the condition of London 40 years hence, predict with confidence that next year we shall appeal on behalf of the Metropolitan Hospital Sunday Fund with no less cause for doing so than we have had in the past. In return for that which has been given in 1906 and in preceding years there will ever be the record of splendid work done and the unrecorded but, let us believe, deep and sincere gratitude of those saved from sickness and pain incalculable.

Insanity and Senile Dementia.

DR. DAVID NICOLSON, in his letter published in THE LANCET of June 9th, p. 1635, drew useful attention to the marked decline in the proportion of pauper patients discharged from lunatic asylums compared with the proportion of discharges among private patients and also to the effect of this decline as affording some explanation of the alleged increase of insanity. In order, however, to provide a satisfactory solution of the problem whether the alleged increasing prevalence of insanity is a reality it is necessary more closely to define the signification of the term insanity and also to differentiate the various forms of mental unsoundness. In the interests of the public it may be necessary equally to certify as insane those suffering from congenital idiocy, from acute mania, from general paralysis, and from senile dementia. If, however, there be reasonable ground to demand more scientific treatment of insanity as a microbic disease, the question arises whether these varying forms of mental unsoundness can be treated as mere variations of the same disease. Moreover, even should this question be answered in the affirmative it would be necessary, in view of this problem of the alleged increase of insanity, to ascertain the relative increase of the certified insane suffering from the several forms of unsoundness.

The Commissioners in Lunacy in their last issued annual report called attention to the growing tendency to send aged persons, most of them presumably suffering from senile dementia, into asylums. It is pointed out that during the five years 1884–88 the annual number of persons aged upwards of 65 years admitted to the asylums in England and Wales was equal to 99 per 100,000 of the population living at those ages; whereas 15 years later (in 1899-1903) the annual proportion of such admissions had increased to 143 per 100,000. This shows an increase during these 15 years of 44 per cent. in the mean annual rate of admissions to the asylums of persons aged upwards of 65 years; or, stated in another way, that while the annual number of such admissions averaged 1267 in the five years 1884–88 it had increased to 2145 in 1899–1903, an annual increase of 878 admissions at these advanced ages. This marked increase in the admissions to the asylums at these ages naturally includes such cases, whether transferred directly from home or from workhouses. The last report of the Commissioners in Lunacy contains, however, much interesting information concerning 1455 cases of admissions of persons aged upwards of 70 years to 83 asylums in England and Wales during the years 1903 and 1904 directly from 393 union workhouses. Of these 1455 cases, 690 were transferred from workhouses to asylums in 1903 and 765 in 1904. It is further noted that 1141 of these admissions were of persons aged between 70 and 80 years of age and 314 of persons aged upwards of 80 years, including 18 who exceeded 90 years of age. The Commissioners discuss in their report the desirability of this growing tendency to transfer these senile cases from workhouse to asylum and while admitting that in many cases the transference is justifiable, if not necessary, they express the opinion that in many instances it has been effected without due discrimination and has operated prejudicially on the patient.

Special attention is called to the very considerable proportion of these aged transferred patients who die within a short period of their transfer to the asylums. It is certainly somewhat startling to learn that of the 1455 senile cases transferred from union workhouses to asylums in 1903 and 1904, 37, or 2·5 per cent., died within a week; 175, or 12·0 per cent., within one month; 502, or 34·5 per cent., within six months; and 666, or 45·7 per cent., within one year of their transfer. These are the mean percentages of deaths among the 1455 admissions at these ages directly from the union workhouses to the 83 asylums in England and Wales during the two years. The proportional fatality varied, however, very widely among the admissions from different localities. For instance, the deaths among the 310 admissions at these ages from the metropolitan workhouses to the London asylums within a year of the transfer did not exceed 27·7 per cent., whereas among the 239 admissions to the Essex and West Ham asylums from the Essex workhouses the deaths during the first year were equal to no less than 56·4 per cent. As the result of inquiries on this subject addressed to the asylum authorities a large proportion of the medical superintendents expressed the opinion that these transferred senile cases were unsuitable for workhouse treatment, as no proper accommodation or supervision is provided in the workhouses from which the patients were transferred. The medical superintendent of Colney Hatch

Asylum, however, expressed the opinion that 32 out of the 49 cases transferred to that institution might have been treated in a special ward of the workhouse infirmary, but that it was doubtful whether any would have been suitably cared for in an ordinary infirmary ward. The Commissioners limited this inquiry to the pauper insane transferred from workhouses and did not deal with those cases of persons admitted directly from their homes at the same advanced ages, who number, as they state, approximately twice as many as the former. It thus appears that during the two years 1903-04 nearly 3000 persons aged upwards of 70 years were admitted to the English asylums and were thus added to the number of the insane under the care and control of the Commissioners in Lunacy.

Apart from the important question as to the expediency of the transference of these cases of senile dementia, which arises from the inquiry of the Commissioners in Lunacy, the facts referred to above suggest a reasonable doubt whether the recent marked increase in the proportion of such cases admitted to the English asylums does not go a long way to explain the alleged increase of insanity. It at any rate accentuates the desirability of a more careful and scientific differentiation of the various forms of insanity and suggests an inquiry whether all these cases of senile dementia are correctly classed with the insane. In the meantime it would be interesting to know whether the 1455 senile cases of transfer from union workhouses to asylums during 1903-04 had previously to the transfer been classed as insane inmates of the workhouses, or whether any considerable proportion of the cases were specially certified as insane to enable the transfer to be made.

The Archives of the University of Manchester.

THE University of Manchester has taken the important and highly commendable step of commencing the publication of the archives of its public health laboratory and has issued, under the able and judicious editorship of Professor SHERIDAN DELÉPINE, the first volume of a series that promises to be of no small interest and value alike to members of the medical profession and to those of the laity who can be led to take an intelligent interest in the conditions by which public health may be endangered or in the precautions by which it may be preserved. The editor explains that as a teaching department of the University the public health laboratory is concerned in the exposition of knowledge by means of lectures and demonstrations and that well-known hygienists have been invited from time to time to deliver lectures upon subjects which they have made their own. The present volume is devoted to the publication of lectures delivered during the year 1904 and of a few reports which formed the bases of demonstrations given by members of the laboratory staff in connexion with these lectures. Original communications bearing upon diseases which are prevalent in the districts surrounding Manchester, or dealing with food- and water-supplies, air, disposal of refuse, sterilisation and disinfection and kindred subjects, will be published in future volumes; and it is manifest that these, as they successively appear, will form a constantly increasing body of trustworthy information upon subjects which are not only of the highest interest to the profession but of supreme importance to the public. It is much to be hoped that the authors of future communications and the editor will alike keep this double relation of their subject-matter constantly in mind, in order that the projected series may come to be recognised as an authoritative exposition of the nature and aims of sanitary work of the highest class, and that it may assist the public to recognise the character of such work and to distinguish it from the foolish claptrap which, in non-professional journals, is not infrequently made to do duty in its stead. Antivaccinationists, "Christian scientists," and similar morbid outgrowths of popular ignorance and conceit owe their very existence to the absence of any general diffusion of knowledge concerning the aims and tendencies of medicine, and such knowledge may be more easily imparted on subjects connected with the prevention of disease than on those connected with its treatment. Professor DELÉPINE and his fellow-labourers will act wisely if they bear in mind the advantages which would accrue from the formation of fresh links of intelligence between the public and the medical profession, and from a better understanding than now exists, on the part of the former, of the extent to which the principles of medicine are becoming based upon strictly scientific analyses of facts and are taking the position of certainties capable of demonstration which it is no longer possible for any but the ignorant to dispute. If we might venture upon a suggestion to an editor of Professor DELÉPINE'S knowledge and sagacity it would have reference to the expediency of exerting a strict control over the tendencies of future contributors to be unnecessarily technical or to express in *quasi*-Greek, which would be double Dutch to an Athenian, occurrences admitting of interesting and lucid statement in English.

Among the most interesting of the communications in the present volume is one by Dr. ARTHUR NEWSHOLME, medical officer of health of Brighton, on the Rôle of "Missed Cases" in the Spread of Infectious Disease. It is a commentary upon numerous instances in which preventive measures against infection have been rendered partially futile by failures of diagnosis; and the difficulties hence arising, which are encountered in the course of almost every epidemic and which have been deplored by almost every observer by whom an epidemic has been investigated, are illustrated by well selected examples. Dr. NEWSHOLME dwells also upon the occasional communication of disease by persons in whom the infective stage is erroneously supposed to have passed away, and in this connexion he gives a salutary warning concerning the limits of utility of bacteriological investigation. There is no doubt that undue reliance has often been placed upon the merely negative sign afforded by the absence of the bacillus of diphtheria from the mucus removed from the throat on some single occasion, and Dr. NEWSHOLME is accustomed to attach a notice to every certificate issued from his laboratory after the examination of a "swab," a notice reminding the sender thereof that the absence of the bacillus does not imply that the case is not diphtheria and that this must be decided on clinical grounds

or on the examination of further specimens. He speaks of instances in which the failure of one endeavour to find the bacillus has induced a medical man to say that there was no diphtheria and improperly to release the patient from isolation, and he further points out that the bacteriological test, if employed to relieve practitioners from the onus of diagnosis in fairly characteristic clinical cases of diphtheria, may be harmful by leading to delay in treatment by antitoxic serum and may even, if the bacillus be missed and a negative result obtained, lead to a dangerous withholding of specific treatment. In very weighty words he lays down the proposition that the true scope of bacteriological diagnosis is for atypical cases which might otherwise be overlooked and that we cannot afford to displace clinical diagnosis from its first and most important position. The warning is of equal value in relation to many other classes of investigations and of disease, for an undue reliance upon methods and instruments of so-called precision has too often been conducive not only to neglect of clinical observation but also to an erroneous belief that such neglect can be made good by methods of a more or less mechanical character, methods often excellent as helps to the really trained observer but never really effective as substitutes for educated touch, educated hearing, and educated sight.

A highly instructive paper by Mr. FRANCIS VACHER, medical officer of health of Cheshire, is illustrated by numerous figures displaying methods by which fraudulent or unskilful plumbers and other workmen have succeeded in neutralising the intended effects of sanitary fittings and appliances of various kinds, and in distributing sewer gases and other abominations through sleeping and dwelling rooms; and the drawings are especially interesting inasmuch as they are all representative of actual conditions encountered by the author in the course of his professional avocations. Dr. J. C. THRESH, the medical officer of health of Essex, discourses learnedly on water filtration in connexion with public supplies, and explains the various conditions under which one or another method of purification must be preferred, the effect of his observations being to show that there is no general rule in the matter, and that every locality must be dealt with in the manner rendered necessary by the actual conditions which it presents and which must be investigated and understood before any system can be recommended for adoption. The object may be merely to remove suspended mineral matter, or it may be to remove low forms of vegetable life other than bacteria, or it may be to remove bacteria of a dangerous or objectionable character, or to remove organic matter held in solution. These several conditions will be determined mainly by the character of the collecting ground, and the degree in which they are present, either singly or in combination, must determine the treatment necessary in the particular case. There is therefore no legitimate opening for the ignorant application of any so-called "rule" by unskilled persons; but there must in the first instance be a study of facts conducted with scientific accuracy, followed by an application of principles to the conditions which are thus disclosed. An essay on Feeding in Relation to the Health of the Young, by Dr. JAMES NIVEN, medical officer of health of Manchester, deals in masterly fashion with a problem which is engaging the attention of many classes of the community and upon the correct solution of which it is possible that much of our future national prosperity may depend. Dr. NIVEN lucidly explains the general subject of food values, with especial reference to the cost of provisions of different kinds, and adds his voice to the voices of many who have preceded him in urging the constantly increasing necessity of educating girls of the industrial classes in subjects which are of such vital interest to them as cookery and the proper selection of food materials for families. The utter practical worthlessness of most of what is called elementary education is a tempting topic but it is one to which the eyes of the public are, we believe, gradually being attracted and upon which, at all events, we must not dwell for the present. We have only space in which to call attention to the account of an inquiry, conducted by Professor DELÉPINE himself, into the existence of an alleged nuisance arising from certain tanneries at Grappenhall, to which an outbreak of diphtheria in the neighbourhood had been erroneously attributed. It would be difficult to find an example of a more careful ascertainment of facts or of more conclusive reasoning upon them when they were ascertained. The investigation may be taken as an almost perfect model of a complicated and difficult inquiry, so conducted as to lead to unassailable conclusions.

Annotations.

"Ne quid nimis."

THE BIRTHDAY HONOURS.

THE Birthday Honours list includes the names of several members of the medical profession—namely, Dr. Robert Farquharson, Sir Christopher J. Nixon, Professor A. R. Simpson, Professor A. E. Wright, Deputy Surgeon-General John McNeale Donnelly, C.B., I.M.S. (retired), Surgeon-General Alfred H. Keogh, C.B., Director-General of the Army Medical Service, Surgeon-General William Simson Pratt, A.M.S., Colonel Henry Kellock McKay, C.I.E., I.M.S., and Lieutenant-Colonel David Prain, I.M.S. Dr. Farquharson, who becomes a Privy Councillor, was for many years M.P. for West Aberdeenshire, and was formerly an assistant surgeon in the Coldstream Guards and medical officer to Rugby School. He has held among other offices that of physician to the Belgrave Hospital for Children and of assistant physician at St. Mary's Hospital, where he was also lecturer on materia medica. He is the author of several works on medical subjects and as a Member of Parliament has conscientiously represented his profession. Sir Christopher Nixon, upon whom has been conferred a baronetcy, is the representative of the Royal University of Ireland on the General Medical Council, and has held the office of President both of the Royal College of Physicians of Ireland and of the Royal Veterinary College in that country. He is senior physician to the Mater Misericordiæ Hospital, a member of the Senate of the Royal University, and professor of the practice of medicine in the Catholic University. He, too, is the author of several contributions to the literature of medicine. Professor Simpson and Professor Wright have received the honour of knighthood. Professor Simpson, emeritus professor of midwifery and diseases of women and children at the University of Edinburgh, was at one time dean of the Faculty of Medicine at that University. He is a honorary Fellow of the American Gynæcological

Society and of the Obstetrical Societies of Berlin, Italy, Leipsic, Moscow, and Paris. In addition to being editor of Sir James Simpson's "Clinical Lectures on Diseases of Women" he is the author of several contributions to the literature of obstetrics and gynæcology. Professor Wright, who is now attached to St. Mary's Hospital, was from 1892 to 1902 professor of pathology at the Royal Army Medical School, Netley. He was a member of the Indian Plague Commission from 1898 to 1900. His brilliant pathological work in connexion with antityphoid inoculation and the discovery of the opsonins is well known to all readers of THE LANCET and has recently obtained for him the Fellowship of the Royal Society. Deputy Surgeon-General Donnelly and Surgeon-General Keogh, Director-General of the Army Medical Service, have been promoted to be Knights Commanders of the Order of the Bath. Surgeon-General Pratt, principal medical officer of the Southern Command, is made a Companion of the Bath, as is also Colonel McKay. Lieutenant-Colonel Prain, director of the Botanical Survey of India, superintendent of the Royal Botanical Gardens, and Government Quinologist, Calcutta, receives a Companionship of the Order of the Indian Empire. To these gentlemen, in the name of the medical profession, we offer hearty congratulations. Mr. J. L. Langman, Mr. Edgar Speyer, and Mr. Felix Schuster, upon whom baronetcies have been conferred, have shown practical sympathy with the work of healing and our readers will be glad to see their names in the Honours list. Sir J. L. Langman organised and sent to South Africa and maintained throughout the late war a fully-equipped field hospital. Sir Felix Schuster is treasurer of the Great Northern Central Hospital and Sir Edgar Speyer has been a munificent supporter of hospitals and has done much to encourage improved systems of hospital administration. And it may be noted that a knighthood has been given to Mr. Luke Fildes, R.A., whose picture of "The Doctor" has been so appreciated by the public. Finally, we must offer our congratulations to the Lord Mayor of London upon the occasion of his being created a baronet. Sir Walter Vaughan Morgan has rivalled the most energetic of his predecessors in the endeavours to promote the success of the Metropolitan Hospital Sunday Fund during his year of office. He has, moreover, long taken an active and practical interest in the welfare of our great medical charities.

THE DERAILMENT OF RAILWAY TRAINS.

THE appalling disaster on the London and South-Western Railway at Salisbury directs attention again, in unhappily a very forcible way, to a question which we have more than once raised in our columns[1] as to whether the practical working of our railways is efficiently supervised. During the last few years we have had several instances of railway accidents due to derailment, and curiously enough there was a case of derailment on the Great Eastern Railway within a few hours of the Salisbury disaster. We need not point out that every linear foot along miles and miles of a railway may become a source of danger, perhaps by reason of subsidence, by a crack in the steel, by the loosening of a "chair" or pin, or by expansion or contraction through sudden changes in the weather. The utmost and frequent supervision of the track is therefore called for. The suggestion may be wrong but it is interesting to observe that recently parts of the country have been subjected to shocks of the nature of an earthquake and these shocks have been followed by more than one instance of derailment. The displacement of earth might, of course, easily account for such accidents, but there are many other happenings which would lead to derailment—as, for example, the travelling of the train at too great a speed round a curve, the snapping of an axle, or the coupling-up of carriages of irregular size and weight. There is a great craze nowadays for speed in travelling and severe competition encourages our railway companies to comply with this demand but a great speed should not be attained at the risk of safety. We may be confident that the Board of Trade will make the most searching explication in regard to this recent disaster, though it must be difficult to obtain trustworthy facts in view of the completeness of the wreckage of the train and of the damage caused to the permanent way by the derailment. We do not forget, however, that on more than one occasion of derailment the Board of Trade has reported that the supervision of railway tracks and rolling stock is not conducted with that precision and frequency which in the interest of the safety of passengers are desirable, a view which we were led to express on the occasion of the somewhat sudden and casual discovery on the South-Eastern line that one of their tunnels threatened to collapse.

[1] Vide THE LANCET, Sept. 6th (p. 686) and Oct. 11th (p. 1002), 1902.

THE IMPORTANCE OF BONE LESIONS AFTER TYPHOID FEVER.

THAT bone lesions, both periosteal and medullary, occur not uncommonly as sequelæ of typhoid fever is very generally known. In cases which go on to suppuration the fact that the discharges containing active typhoid bacilli may be the means of spreading the disease has been very generally overlooked. The bacilli of typhoid fever were traced to the medulla of bones by Chantemesse in inoculation experiments in animals, while in the human subject definite changes in the bone marrow have been described. It is not therefore surprising that the osseous lesions develop. Statistics show that they are commoner in the bones of the lower limbs and that in many cases the abscesses which form yield a pure culture of typhoid bacilli. In a few cases a long interval has elapsed between the disease and the development of the bone lesions. In a case recorded by Buschke there was an interval of 46 years and yet active typhoid bacilli were found in the pus from the bone. A case of this kind recorded in this week's issue, p. 26, by Mr. L. S. Dudgeon and Dr. Ronald E. G. Gray illustrates the possible danger of such cases in spreading the disease. The patient was treated at St. Thomas's Hospital in 1902 for a severe attack of typhoid fever, in the course of which a perforation of the ileum was successfully sutured by Mr. W. H. Battle. Shortly after the patient's discharge from the hospital in September of that year he was readmitted for pain in the right femur and knee which subsided under local treatment and the administration of iodide of potassium. In October, 1904—i.e., after a lapse of more than two years—he returned to the hospital with an abscess of the lower third of the right femur, from the pus of which Mr. Dudgeon isolated the bacillus typhosus in pure culture. The patient left the hospital with the wound soundly healed in December, 1904, but shortly afterwards a sinus formed and continued to discharge. In June, 1905, he returned to the hospital and was treated for this sinus as an out-patient. Shortly afterwards his wife was admitted suffering from a severe attack of typhoid fever from which she eventually died. At this time typhoid bacilli were still to be found in the discharge from the wound. On questioning the patient it was discovered that he had dressed the wound himself but that his wife had collected the soiled dressings and burnt them. It therefore seems probable, in the absence of any other known source of infection, that the patient's wife was infected by the bacilli in these dressings. Mr. Dudgeon and Dr. Gray draw attention to the importance of making a bacteriological examination in all cases of bone disease which may possibly be due to typhoid fever in order to avoid the spread of the

infection by this means. Their case emphasises the importance of dealing with all the discharges from patients suffering from typhoid fever. It is not so very long ago that the importance of the urine as a means of infecting other persons was recognised and there is little doubt that neglect in dealing with the urine has been responsible for the spread of the disease in the past. The long time which the bacilli may continue to be found in the discharges from a sinus connected with a bone lesion, though exceptional, as pointed out by Mr. Dudgeon and Dr. Gray, is yet not to be lost sight of. A further point of interest in connexion with this case was the beneficial effect of irrigation with a 1 per cent. solution of urotropin, in which typhoid bacilli will not grow, since after a few days no typhoid bacilli could be found in the discharges.

SUBURBAN DEATH-RATES.

THE value of the death-rate as the barometer of public health and as a stimulating influence on health progress can scarcely be overrated. The value and increased use of the death-rate in recent years render it, however, the more necessary that its limitations should always be borne in mind and duly appreciated. The Registrar-General's reports have long warned the public that the crude death-rate of a population, without correction for age and sex constitution, may frequently induce false inferences. There are, moreover, other disturbing influences, more especially in the case of suburban death-rates, allowance for which is fully as necessary, but not so simple, as correction for age and sex distribution. In his last annual summary for 1905 the Registrar General publishes in a table side by side the crude death-rates during that year in 76 of the largest English towns, and the corrected death-rates, after due allowance for the age and sex distribution, of the population of each town. The age constitution of nearly all town populations is conducive to a low rate of mortality and consequently the corrected death-rate is higher than the crude rate; in watering places, however, such as Brighton, Hastings, Great Yarmouth, and so on, the undue proportion of elderly persons raises the recorded death-rate, and the corrected rate is in such cases lower than the crude rate. The corrected death-rate in these 76 towns ranged last year from 8·63 per 1000 in Hornsey to 23·44 in Merthyr Tydfil but it can scarcely be held that these corrected rates imply the true relative health condition of these two towns. Hornsey is obviously a suburban portion of the metropolis, although not forming part of the County of London, and it is a fact that in this list of 76 towns, ranged in order of their corrected rates of mortality from the lowest, four other suburban towns (King's Norton, Leyton, Handsworth (Staffs), and Walthamstow) follow Hornsey with the lowest rates. Now there can be no question about the extremely satisfactory health condition of Hornsey; and it is a fact that the deaths of infants under one year of age in this district did not exceed 66 per 1000 registered births—a considerably lower rate of infant mortality than prevailed in any other of the 76 towns. The birth-rate in Hornsey last year, however, was so low as 18·5 per 1000, which sufficiently proves the abnormal constitution of the population in this suburban district. Moreover, an annual death-rate of 8·63 per 1000 in a stationary population would imply a mean duration of life of about 116 years, which forbids the acceptation of the rate as a true indication of the rate of mortality of the 84,070 persons estimated to be living in the district in the middle of last year. It appears from the last census report that of the 40,791 females of all ages residing in Hornsey in 1901 6816, or 16·7 per cent., were domestic servants and that the proportion of domestic servants was equal to 43·8 per cent. of the separate occupiers, the mean proportion in the County of London being 23·0 per cent. This large proportion of domestic servants not only indicates that the population includes an exceptional number of the well-to-do and servant-keeping class but it also unduly depresses both the birth-rate and death-rate, as domestic servants are as a rule unmarried or widowed and when ill generally leave the district in which they are in service. Moreover, such suburban districts as Hornsey very seldom contain either workhouse or hospital, and it should be borne in mind that 37·5 per cent. of the deaths debited to London by the Registrar-General in his Annual Summary for 1905 were recorded in workhouses, hospitals, and lunatic asylums, against 35·0 per cent. in 1904. These remarks (except as regards deaths in institutions) apply with almost equal force to the death-rate in the metropolitan borough of Hampstead which, although included within the County of London, is distinctly suburban in character. The recorded crude death-rate last year among the 88,142 estimated residents within this borough did not exceed 9·3 per 1000 and after correction for the age and sex constitution of the population it is only raised to 10·5, scarcely more than half the corrected rate in the metropolitan borough of Shoreditch, which was 20·6. It is a fact, however, that no less than 27·0 per cent. of the enumerated female population of Hampstead in 1901 were domestic servants, who averaged 79·8 per cent. of the separate occupiers; whereas in Shoreditch only 2·4 per cent. of the females were domestic servants and their proportion to separate occupiers did not exceed 5·5 per cent. These facts and considerations seem to suggest that death-rates for suburban districts, even if corrected for sex and age constitution, should not be accepted as altogether trustworthy indications of the relative health condition of their populations without due allowance for other disturbing factors.

BIER'S TREATMENT OF INFLAMMATION BY PASSIVE CONGESTION.

FOR some years Professor Bier has advocated a rather revolutionary method of treating acute inflammation—the induction of passive congestion—and has reported remarkable results. His method is now being extensively employed on the continent, as the large number of papers advocating it show. There is ample evidence that it gives results attainable in no other way. In this country as yet it has had little vogue. In the *Scottish Medical Journal* for April Mr. C. W. Cathcart has reported a number of cases treated at the Royal Infirmary, Edinburgh, in which its value is confirmed. To these we have previously referred.[1] Professor Bier, in opposition to the old antiphlogistic idea, regards inflammation as a curative process which ought to be encouraged and utilised. In a case of acute whitlow extending along a tendon sheath to the wrist he binds a piece of Martin's rubber bandage around the upper arm. In inflammation affecting the foot he applies the bandage to the thigh—i.e., always some distance above the seat of disease. The bandage is put on sufficiently tight to obstruct the venous return but to diminish only slightly the arterial flow. In acute cases the pressure is very light. Any accessible pulse below the bandage should be easily felt and the limb should be warm. A test of the proper degree of tightness is the relief of pain. Sometimes much patience is required before this degree is attained. When it is the rapid relief is striking. In a few cases, chiefly gonorrhœal, pain may be at first increased, although it afterwards diminishes. Another test of the proper application of the bandage is the effect upon the whole limb, which begins to swell while the fiery red colour of the inflamed part extends up to the bandage. When the œdema is well established serum escapes freely from any wound which may exist. In bad cases the passive congestion is kept up for 22

[1] THE LANCET, Feb. 17th, p. 451.

out of the 24 hours and this period may be diminished by degrees to ten or eight hours. The position of the bandage should be changed after remaining about ten hours in one place. In the intervals of relaxation the limb should be raised so as to favour absorption. Any pus which may form should be let out but the incision need not be so extensive as would have been necessary without the treatment. Professor Bier has published a number of cases treated successfully by his method. These include "Transformation of Acute into Chronic Abscess," "Disappearance of Abscess," and cases of rheumatic, gonorrhœal, and suppurative arthritis. The following is one of the cases reported by Mr. Cathcart. A man, aged 40 years, was admitted into the Edinburgh Royal Infirmary on Nov. 8th, 1905, for pain and swelling of the right hand and forearm. About a fortnight before he felt pain in the thumb which he attributed to the prick of a thistle. On Nov. 5th he was worse and an incision was made into a swelling on the ball of the thumb without relief. On admission he was in great pain, the hand was dark red and much swollen, and swelling extended irregularly up the forearm to the elbow. At 2 P.M. an elastic bandage was applied to the middle of the upper arm; at 7 P.M. he was much easier and there was no throbbing in the hand as before, and the forefinger could be moved a little at the metacarpal joint. There was great œdema of the hand and forearm below the bandage. The anxiety as to the further spread of the inflammation ceased. On Nov. 17th a slough, of about the size of a hazel nut, separated from the pulp of the thumb. On Nov. 24th an abscess on the palmar aspect of the thumb was opened. On Dec. 12th the wounds were nearly healed, although there was still some stiffness of the wrist and fingers. In another case a woman suffering from gonorrhœal rheumatism of the knee for four weeks had been treated without relief by all ordinary methods. 15 minutes after the application of the bandage the pain was relieved. She steadily improved and was able to walk about. How does the passive congestion act? Professor Bier suggests that the œdema produced has an anæsthetic action on the fine nerves. The exuded serum and leucocytes no doubt have a bactericidal action which checks the inflammation.

COUNTRY HOLIDAYS FOR LONDONERS.

THE financial support of the various institutions which have for their object the provision of a few days' holiday in the country for the children of the poor is a duty upon the well-to-do Londoner. In a city like London it is inevitable that many children should be brought up in an environment which must heavily react upon them and the ameliorating effects of a holiday in the country, though only for a few days, are undoubted. 360 days of a dreary year may be lightened by a five days' sojourn in the unwonted surroundings of the country. And the arguments used on behalf of the children can be used also for their elders. There are many poor folk in London to whom the stay among green fields for a few short days would mean invigoration to continue their arduous struggle, and though the needs of the children may come first in our minds their case is not always more urgent than that of their parents. The Bishop of London is appealing in the public press on behalf of the Women's Holiday Fund, Denison House, Vauxhall Bridge-road, S.W. For the Factory Girls' Holiday Fund, St. Peter's Rectory, Saffron-hill, E.C., we have frequently appealed, and also for the Children's Country Holiday Fund, 18, Buckingham-street, Strand, W.C. Appeals are also being made for the provision of country holidays by the authorities of the Rosemary Ragged Schools, 161, Highbury New Park, N.; by the Fox Court Ragged School and Mission, 136, Pentonville-road, N.; by the St. Thomas's, Stepney, Sunday School, the Vicarage, Arbour-square, Stepney, E.; and by the Mansfield-street School (Secretary, 11, Fentiman-road, Clapham-road, S.W.); while Canon Allen Edwards writes with the same object from All Saints Vicarage, South Lambeth, S.W., on behalf of 3500 children. We must mention one more appeal, and in doing so may ask our readers to notice how prominent a part in the good work which we have outlined is played by the clergy. The clergy of London are many of them quite poor. For practical purposes they may be said to live the lives and bear the burdens of the humblest of the community and to them a break in their arduous routine is as welcome and beneficial as it is to any of their charges. Canon Benham is appealing on behalf of the Country Holiday Fund of the Poor Clergy Relief Corporation, contributions to which may be sent to 38, Tavistock-place, Tavistock-square, London, W.C.

THE DEATH OF MANUEL GARCIA.

A LITTLE more than a year ago—namely, on March 17th, 1905—the one hundredth anniversary of the birthday of Señor Manuel Garcia was being celebrated in London when representatives of music and science from all parts of the world assembled to do him honour. Our own Sovereign conferred upon him a Commandership of the Royal Victorian Order. Now he has passed away, having died in London on July 1st, but his memory will remain for all time, especially in the hearts of members of the medical and musical professions who owe so much to him as the inventor of the laryngoscope. As Professor Fränkel said during the Garcia centenary celebrations, "the genius of Señor Garcia has thrown light on the dark places of the larynx and the source of the living human voice."[1] Señor Garcia was born on March 17th, 1805, in Madrid, and afterwards became a teacher of singing, his three children Manuel Garcia, Madame Malibran, and Madame Viardot-Garcia following in his footsteps and becoming great musicians. The story of how he came to invent the instrument which has made his name famous has been told so many times that we need not repeat it here except to refer to the fact that the results of his investigations were presented to the Royal Society in a paper entitled "Physiological Observations on the Human Voice" which was published on March 22nd, 1855. It was on the invitation of Sir (then Dr.) Felix Semon that Señor Garcia read his paper on the Invention of the Laryngoscope at the International Congress of Medicine held in London in 1881. It is interesting to note that he was the oldest honorary member of the Laryngological Society.

A NEW REVIEW OF SCIENTIFIC PROGRESS.

A QUARTERLY journal of scientific thought entitled *Science Progress in the Twentieth Century* has made its appearance under the editorial supervision of Dr. L. H. Alcock and Mr. W. G. Freeman, Mr. John Murray being the publisher. Since the lapse of *Science Progress* in 1898 there has been no journal of British science devoted to comprehensive summaries of recent work, although specialisation and multiplication of technical journals render it increasingly difficult to keep abreast of the advances of knowledge, so that even those actually engaged in scientific work seldom are able to inform themselves save in the most superficial manner of work done in other fields than their own. In the new journal, using the words of its preface, "the chemist will describe for the botanist recent advances in chemistry, the botanist will do the same service for the chemist, even it is hoped to the advantage and assistance of both," and as the summaries are to be prepared by those actually engaged in the work facts ought to be marshalled in true perspective. We wish the new venture, which starts auspiciously, every success. Its

[1] Vide THE LANCET, March 25th, 1905, p. 814.

rôle may be more to inform the public than the man of science, but it is important, highly important, to the cause of science that the public, now generally educated, should be able to appreciate the scope and value of scientific work. Medical men in particular feel this. Among the articles in the first number we may mention as specially interesting a paper upon Physical Geography as an Educational Subject, by Dr. J. E. Marr; one upon the Australian Mining Fields, by Mr. J. W. Gregory; and one upon the Distribution of Injurious Insects, by Mr. F. B. Theobald. Mr. Theobald's paper is calculated to mitigate the pride of the twentieth century in the strides of civilisation, for it is clearly shown that the development of methods of intercourse by means of boats and trains afforded facility for the spread over the globe of a great number of injurious insects.

KING EDWARD VII. SANATORIUM.

THE King has approved of the following appointments in connexion with the King Edward VII. Sanatorium at Midhurst. Consulting staff: Sir William H. Broadbent, Bart., K.C.V.O., F.R.S., Sir Richard Douglas Powell, Bart., K.C.V.O., Sir Felix Semon, K.C.V.O., Sir Hermann Weber, Sir Lauder Brunton, F.R.S., Dr. C. Theodore Williams, M.V.O., Professor T. Clifford Allbutt, F.R.S., Professor William Osler, F.R.S., Dr. James Frederic Goodhart, Dr. J. Kingston Fowler, Dr. Percy Kidd, and Dr. William Bulloch. Executive committee: The Viscount Esher, G.C.V.O., K.C.B. (chairman), Sir Frederick Treves, Bart., G.C.V.O., C.B. (deputy chairman), the Hon. Sidney Peel, Sir Francis Laking, Bart., G.C.V.O., Colonel Lascelles, M.V.O., Mr. William James, D.L., J.P., Mr. Rowland Bailey, M.V.O., I.S.O., and Dr. P. Horton-Smith-Hartley, M.V.O. (honorary secretary). Lady Visitors: Mrs. William James and Miss Ethel McCaul, R.R.C.

SALTS OF SILVER IN OPHTHALMIC PRACTICE.

FOR many years the only preparation of silver that was in common use in the treatment of diseases of the eye was the nitrate. Solutions of this salt containing two, five, or ten grains in an ounce of water occupied a prominent position on the table or desk of every ophthalmic surgeon who instilled a drop with a quill or brush in all forms of conjunctival inflammation and in many cases of ulcer of the cornea. Occasionally ointments of similar strengths were applied to the inner surface of the lids and now and again the solid stick of the pure or mitigated salt was passed lightly over the surface. There is no doubt that these applications were in many instances highly effective in arresting morbid processes, though their efficacy had been learned purely empirically and, of course, without the knowledge which we now possess of their mode of action. Lately efforts have been made to introduce other salts of silver into practice and a pamphlet has been published by Dr. Darier of Paris in which the chief combinations of nitrate of silver with organic compounds are set forth and warmly recommended on the grounds of their comparative painlessness when topically used and their greater power of penetration. Dr. Darier is of opinion that the bactericidal action of nitrate of silver is due to the silver base, whilst the acid with which it is combined exerts an irritant or even caustic action on the tissues as soon as it is set free by the combination of the silver with albumins of the tissues, for which it has a strong affinity. It is the liberated acid which is the cause of the irritation and pain, often very severe, which follow the employment of the watery solutions. S. Fraenkel of Vienna has suggested that a far more satisfactory mode of exhibiting the salts of silver is by combining the base with albuminous compounds. Any such compound should be soluble in water; should occasion neither irritation nor pain; and, lastly, should not coagulate albuminous substances. Dr. Darier, in the first instance, experimented with argentamine recommended by M. de Hoor, and found that solutions of from 3 to 10 per cent. were much less painful than the ordinary nitrate solutions of equal strength. Argentamine is a solution of ethylene diamine-phosphate of silver. The ethylene-diamine which enters into the composition of argentamine is an organic base with feebly caustic properties but having the property of redissolving the precipitates which the salts of silver form in contact with the tissues. By micro-chemical research it has been shown to possess great penetrating powers. Moreover, which is of high importance in a therapeutic point of view, argentamine is much more rapidly and more surely fatal to the gonococcus than the solutions of the nitrate of corresponding strength. For all catarrhal and purulent affections as well as for trachoma it may be advantageously substituted for the nitrate. Another salt of silver of great value as an antiblennorrhagic is argonin, in which silver is combined with casein, but Dr. Darier cannot recommend it with equal confidence. The sulpho-phenate of silver has been proposed by M. Zanardi as being antiseptic and but little irritant. Itrol (citrate of silver) recommended by Nénadovic is of more than doubtful value. The cornea in some instances resents its action. Collargol, both in solution and in the form of ointment, has been found serviceable in blennorrhagic affections by various authors, but Dr. Darier appears to hold that protargol is the most effective and useful of all the preparations of silver. He uses it in solution in the proportion of 1 part of protargol to 4 of water, one drop of which should be dropped into the eye every hour in cases of purulent ophthalmia.

AN AMBULANCE SERVICE FOR LONDON.

THE *Times* of June 26th contained an article on Street Ambulances, pointing out that "the somewhat tardy development of the street ambulance service for the metropolis which both the authorities of the City and of the London Council have led us to expect ..... is a condition of things not in the highest degree creditable to the capacity for local government upon which English people are usually somewhat inclined to plume themselves." This charge, so far as it applies to the London County Council, has been answered by Sir William J. Collins, M.P., who shows that the London County Council has recognised that London is "far behind many provincial towns and most large cities on the Continent and in America in the matter of the provision of rapid ambulances for dealing with accidents and cases of sudden illness occurring in the streets." The Council, however, has not the power to spend money on street ambulances, but a "General Powers Bill" which is now before Parliament and has already passed the Commons will, Sir William Collins says, give the Council power to remove a reproach from London which the Council has recognised but has not hitherto had the power to alter. Sir William Collins concludes his letter by remarking that "the lack of such ambulance service was exhibited in the disastrous tram accident at Highgate last Saturday [June 23rd], and as a hospital surgeon I can testify that the present method of bringing injured persons into hospitals in hansoms and fourwheelers is both cruel and fraught with grave peril to the injured." We have ourselves on many occasions referred to the crying need for an efficient ambulance system for the conveyance of those injured in our streets to their own homes or to a hospital and have more than once impressed upon our readers the desirability of becoming members of the Metropolitan Street Ambulance Association, of which Mr. Reginald Harrison is president and Dr. Arthur W. James secretary.

The awakening of the London County Council in this matter is, no doubt, in a large measure due to the work done by this association which numbers among its members the presidents and many members of the Councils of the Royal Colleges of Physicians of London and Surgeons of England and members of the staffs of all the large London hospitals. It may be said, therefore, that the medical profession in London has but one mind regarding the provision of an efficient ambulance service. The whole matter of the need for, and provision of, street ambulances was admirably discussed at a meeting of the Metropolitan Street Ambulance Association held on May 2nd, 1904, and reported at length in our columns on May 7th of that year, p. 1301.

THE GREENWICH OBSERVATORY.

IT is stated that the highways committee of the London County Council has received a communication from the authorities at the Admiralty in which the proposal is made to inaugurate forthwith a series of tests to extend over some time with the view of settling the question as to how far the observations at the Greenwich Observatory are disturbed by the Council's electric generating station. The investigation will be conducted by representatives of the Admiralty and of the Council which at its meeting on Tuesday last decided to accede to the proposal, appointing Sir Benjamin Baker as its expert to be present at the inquiry.

THE LATE DR. JOSEPH KÖRÖSI.

Dr. Joseph Körösi, who died at Budapest on June 23rd after a long illness, was a statistician of European celebrity. Some of our readers will no doubt remember seeing him at the Congress of Hygiene and Demography held in London in 1891, where he was one of five gentlemen representing foreign nations who spoke at St. James's Hall after the delivery of the inaugural address by his present Majesty King Edward, then Prince of Wales. On this occasion he made a long speech in English, showing an intimate acquaintance with what had been done by English workers in the field of demography and vital statistics. He also in the Section of Demography and Industrial Hygiene read a paper on the Effect of the Age of Parents on the Health of their Children. Finally, he was the bearer of an official communication from the city of Budapest inviting the Congress to hold its next meeting in that city. This invitation was accepted and the Congress met there in September, 1894. The deceased, who was in his sixty-second year, was a member of the Hungarian Academy of Sciences, Chevalier of the Order of Francis Joseph and of the Legion of Honour, Member of the Institut International de Statistique, and Director of the Statistical Bureau of Budapest.

THE Department of Public Health of Queensland, in its Plague Bulletin, No. 12, states that during the week ending May 26th no new cases were reported in either Brisbane or Rockhampton. In Rockhampton 4 cases remained under treatment but there were not any in Brisbane; in Rockhampton, of 309 rats and 31 mice which were bacteriologically examined 5 rats were found to be infected. The medical officer of health of the Cape Colony states that during the fortnight ended June 9th there were 249 rats and 160 mice bacteriologically examined, of which 2 mice proved to be plague-infected. In Hong-Kong during the week ended June 30th there were 21 cases of plague and 17 deaths reported.

WE direct the attention of our readers to the fact that the council of Epsom College has an opening for the presentation of a girl to the Schools of St. Anne's Society. Candidates must be between the ages of seven and 12 years and must be the orphan daughters of duly qualified medical men who have been for not less than five years in independent practice in England or Wales. Forms of application can be obtained at the office of the College, 37, Soho-square, London, W.

Dr. T. Gregor Brodie, professor superintendent of the Brown Animal Sanatory Institution, will deliver a course of five lectures at the University of London on the Secretion of Urine under Normal and under Pathological Conditions. The lectures, which are free, will be delivered in the physiological laboratory of the University at South Kensington at 5 P.M. on July 9th, 11th, 13th, 16th, and 18th.

Dr. Hugh J. M. Playfair has been appointed by the council of King's College, London, lecturer in practical obstetrics in the medical school.

EPSOM COLLEGE.

THE annual general meeting of the governors of Epsom College was held at the office in Soho-square on Friday, June 29th. Amongst those present were Sir William S. Church, Bart. (chairman of the council), Sir Constantine Holman, M.D. (treasurer), Sir R. Douglas Powell, Bart., K.C.V.O., Sir Dyce Duckworth, Mr. Stanley Boyd, Surgeon-General A. M. Branfoot, I.M.S., Mr. J. Paul Bush, C.M.G., Dr. William Collier, Dr. John H. Galton, Dr. F. de Havilland Hall, Mr. John H. Morgan, C.V.O., Mr. Henry Morris, Mr. Bilton Pollard, Dr. Frederick Taylor, Dr. J. Roberts Thomson, Dr. George Eastes, Dr. W. Rigden, Mr. Andrew Clark, and Dr. C. Caldecott. The secretary reported the result of the voting to be as follows:

PENSIONERS.

Name.	Votes.	Name.	Votes
1. Harriet Hamilton* ...	8342	4. Hannah Scotland	5127
2. Wm. F. Phillips†	7816	5. Susannah M. Fenton ...	5117
3. Georgina Skinner†	7793		

FOUNDATION SCHOLARSHIPS.

Name.	Votes	Name.	Votes
1. Peter M. Braidwood ...	7794	3. Robert R. L. Williams ...	5007
2. Arthur Chamberlayne ...	6177	4. Geoffrey J. Barrow ...	3599

* Pugh pensioner. † Highett pensioners.

The Secretary reported that two further vacancies for pensioners having arisen the council would that day admit the two candidates next on the list—namely, Elizabeth Sutcliffe, 4860 votes; and Rosina S. Douglas, 2129 votes.

The chairman, Sir CONSTANTINE HOLMAN, moved the adoption of the report of the council to the governors, which stated that for the year 1905 there was an excess of expenditure over income of £1426 10s., excluding the cost of special drainage works, which in the two years had amounted to about £8000. In order to meet this extraordinary outlay the council had been compelled to part with all the stocks belonging to the general purposes fund, the only remaining asset being sundry mortgages amounting to £2550. A munificent donation of £5000 had been received from a lady, of which a sum of £4000 was for the purpose of founding a scholarship and several pensions in order to perpetuate the name of Dr. Highett of Montpelier, Bristol, the remaining amount of £1000 being a contribution to the extraordinary expenses in connexion with the drainage referred to. The council had given greater facilities for the admission of day boys, the founder of the College having intended to admit a large number, but owing to the inconvenient hours of attendance hitherto in force this intention had never been realised. Last year the school was formally inspected under the direction of the Joint Universities' Board, all the teaching arrangements being reviewed by four inspectors. Their report was most satisfactory and it was followed by recognition by the Army Council, thus enabling the school to send in candidates for the army examinations. The health of the boys had been excellent on the whole and the work and discipline had been all that could be desired. Since the

last report H. L. Ridley had been awarded the "Mayo" scholarship of £70 for four years, which is given to a boy born in the county of Wiltshire and proceeding to the University. 11 boys had passed the whole or a part of the preliminary examination for the degree of M.B. or B.S. of the University of London; three boys had passed the matriculation examination of the same University in Division 1 and 12 in Division 2; five boys had gained the higher certificate of the Oxford and Cambridge Schools Examination Board; and 36 had gained the lower certificate. The council had at last been able to make an important alteration in the dietary of the boys, meat breakfasts being now provided for all free of charge.

The adoption of the report and of the income and expenditure account having been agreed to, Sir CONSTANTINE HOLMAN, the retiring treasurer, made his valedictory speech as follows:—

LADIES AND GENTLEMEN,—Half a century is a large slice out of a man's life, and it is 51 years since, at a meeting of the Surrey Medical Benevolent Society, I took part in the negotiations with Mr. Propert for an advance of £2500 to be applied towards the initiation of Epsom College, in return for certain scholarships in perpetuity which the Society was to receive. Even before that time I had been engaged in work for the South-Eastern Branch of the British Medical Association. Thus I can say that for considerably more than 50 years I have taken an active part in the public life of the profession and for 41 of those years I was engaged in a large general practice.

A brain that has been incessantly busy about many things for so long a period cannot work on at full pressure indefinitely. Sooner or later there comes a time when a man feels that the burden which he has hitherto borne with comparative ease is becoming irksome, and when responsibilities not only lie heavy upon him but become worrying anxieties. When that time comes I hold that a man should take stock of his own powers, and, in the interest of institutions in the direction of which he takes a prominent part, should retire from the position of an active administrator—before he loses the sense of the true proportion of things and the elasticity of mind that enables him to adapt himself to changes without which there can be no progress, before his judgment stiffens into obstructiveness or relaxes into vacillation and uncertainty. The duties of the office of treasurer to Epsom College carry with them heavy responsibilities, and I may be allowed to say that I have always looked upon everything that seemed to come within the sphere of those duties as a matter of grave importance. The treasurer's burden does not grow lighter and I had reluctantly to come to the conclusion that it must be transferred to shoulders less bowed by the weight of years. I should not have resigned an office which I have held, with great pride, for 19 years had I felt any longer equal to a strain which must increase as the power to bear it diminishes.

A glance at what has happened during the time I have been treasurer may be permitted. In 1887 the council pressed me to accept office as your treasurer, and with great reluctance I consented. At about the same time I was appointed treasurer of the British Medical Association, and for three years held the two offices—a double burden I should advise no one again to undertake. When the late Mr. Wood became head master of the College I found in him a fellow worker after my own heart, and I never can adequately acknowledge the help he was always ready to give. Up to that time the moneys of the College went into one pocket, but we then decided that the funds of the charity and the school should be kept separate. Finding the niceties of the division beyond our powers, I received permission from the council to call in expert aid, and we were most fortunate in securing the help of Mr. May, who ever since has remained our trusted counsellor—one most careful, most able, and most willing to advise. I would warn my successor that Mr. May has a habit of sending to the treasurer a most courteous letter annually, after completing his audit, placing his finger with most fatal precision on the weak point of the year's balance sheet. For myself I have ever welcomed these minatory letters and where possible have acted upon them. I envy the incoming treasurer the balance sheet which he will be able to bring forward as his first offering, for it promises to be the most satisfactory we have seen for many years and I think he will be able to say that, although he is a poor man, his balance sheet is sound and to be understood by anyone who seeks to know the financial condition of the institution.

The experience gained as a member of the Council of the British Medical Association, on which I served for nearly 40 years, was most valuable to me in my work at Epsom. That experience led me on my appointment as treasurer to urge upon my council the desirability of instituting committees—school, finance, selection, and works—among which the labour of administrative work was divided. These committees, composed of picked men of the council, made inquiries and threshed out questions that had to be dealt with; their reports were printed and circulated among the members of the council who thus had the opportunity of making themselves fully acquainted beforehand with every subject which was to be considered at their meetings. So well has this system worked that I can hardly call to mind an instance in which any important amendment has been moved at a meeting of the council. I have not had an easy time as treasurer. The water-supply for a long time caused much anxiety and frequent expense; I hope the matter is now settled for all time. The bursting of the bath led to the discovery that it had never had a proper bottom; it cost us £1100 to put this right. Last, but not least, came the almost crushing calamity of a breakdown in our drainage, on the renovation of which we had to spend no less than £8000. We have now a plan of drainage laid in the best possible manner known to sanitary science of to-day and with the best materials. So far as human ken can reach it should serve us for many, many years to come. This expense has been paid but only at the cost of selling almost all our realisable securities.

Fortunately, there is a brighter side to the picture and on this I ask you to look with gratification at what has been done and a hope of even better things for the future. You have 27 more acres of freehold land than you had 20 years ago; you have a lower school in full work, with accommodation for more pupils; and you have a fully equipped chemical laboratory and lecture room. Acting on the advice of the examiners, the council decided to extend the science teaching which had been started in makeshift quarters. I hope the legacy we are to receive under Dr. Corbett's will may enable my successor to make better provision for this most important department of the school work. I hope, too, that an increasing number of boys will warrant an increase in the number of masters. In view, however, of the fact that for some years we have been overstaffed owing to the number of subjects that have to be taught, the increase in the number of pupils should be substantial. Whereas in 1887 we had 191 pupils, there are now 254, which, so far, is our high-water mark; we are, I think, justified in believing that the increase is at least partly due to the elimination from the title of the word "Benevolent" which gave rise to the mistaken notion that Epsom College was a charity school. The decision of the council to encourage the attendance of day boys was carried unanimously. Although it was the wish of our founder to attract such boys, hitherto there has been no opportunity for boys coming from any distance. It has been found possible to overcome this difficulty and I trust that the facilities for the attendance of day boys which the council has recently given will never be curtailed. Other schools welcome day boys and I may mention that a member of our council, himself a former pupil of Clifton College, has borne emphatic testimony to the fact that the presence of these boys was regarded as a source of strength to that college. It has always been a pleasure to me to keep in close touch with the teaching staff and the principal officers of the College. Needless to say, many little clouds which are, it may be, at first no bigger than a man's hand but which will darken the heavens if allowed to grow, may be dissipated by a word spoken in season. The teaching staff are a splendid body of men whose whole heart is in their work; for proof of this one need only look at the scholarships and distinctions won at the hospitals and at the universities by those whom they have trained. Of the three matrons I can only say in homely phrase that they would be hard to beat. The reformations wrought by the College matron have been of the highest value: Miss Brown, our lower school matron, who plays the part of a mother to 50 small boys, is beyond praise, whilst Miss Hassall, who has for 16 years been the infirmary matron, has never failed us in times of grave difficulty and has earned the gratitude of many an anxious parent. Mr. Lamb, whom our council knows and trusts, I have much to thank for and I cannot say enough in acknowledgment of his help. I cannot conclude without referring to the incorporation of the asylum into the school premises, at a rental, whilst the aged pensioners with augmented annuities can live where they please and pass their last years amongst friends and relatives. I have heard of nothing but satisfaction expressed at this change.

A word about the council itself may not be out of place here. I have often wondered whether the governors in general have estimated at its true value the strength of the present council of the College, to the formation of which have gone infinite care and patience. That the body contains within itself all the elements that make for efficiency, will be made apparent by a study of its composition and the balance of its parts. The council consists of leaders of the profession, teachers in the great medical schools of London, representatives of the provinces whose position entitles them to the respect and confidence of their fellows, old Epsomians and two or three gentlemen of note outside the profession. In Sir Arthur Watson, Bart., K.C., chairman of the Middlesex Hospital Committee, we have now a most valued member who never fails us when we ask counsel of him in legal difficulties.

And now, Ladies and Gentlemen, Governors of Epsom College, it only remains for me to resign into your hands the trust you placed in mine 19 years ago. From my heart I thank you for the honour then done me. I have done my best, and I hope I have not been an altogether unprofitable servant. As for my colleagues on the council, how can I find words to express my gratitude to them, who have so long trusted me with their fullest confidence, who have been so indulgent to my many shortcomings, who have borne with all my failings, and who have been in every way so considerate to me? Old colleagues and dear friends, I can only say I thank you with all my heart.

Sir WILLIAM CHURCH, the chairman of the council, then proposed the following motion which was carried unanimously:—

That the governors of Epsom College desire to express the great reluctance and regret with which they accept the resignation of the treasurership by Sir Constantine Holman, M.D. They desire to record upon the minutes that during the 19 years he has held this important office the institution and the College have made uninterrupted progress, the finances of both having been placed on a satisfactory financial basis under his guidance. The governors earnestly trust that Sir Constantine Holman will be spared for many years to continue to give the council the benefit of his wide experience as a member of their body.

Sir CONSTANTINE HOLMAN thereupon proposed from the chair that Mr. Henry Morris should be appointed treasurer of the College, the proposition being carried unanimously.

Mr. MORRIS then took the chair vacated by Sir Constantine Holman and whilst thanking the governors for the honour which they had conferred upon him assured them that he would do his best for the College, in which he had always taken the deepest interest. He was one of the first boys to enter the school and he felt that this lengthened interest would instigate him to do, if possible, even better than his best for the welfare of the institution. Before resuming his seat he moved that Sir Constantine Holman should be elected a member of the council in the place vacated by himself, which proposition was carried with acclamation.

The formal business which followed included the election of members of the council for a further period of three years, a vote of thanks to, and the re-election of, the auditors, the confirmation of by-laws for the Highett pensions and

scholarship, and the passing of a cordial vote of thanks to the founder of these benefactions. A vote of thanks to the chairman concluded the proceedings.

MEDICINE AND THE LAW.

The Peculiar People.

A MAN named Cook, described as an unemployed horse-keeper and a member of the sect known as the Peculiar People, has been sentenced at the Old Bailey to nine months' hard labour for manslaughter. The case did not in any way differ from the trials for manslaughter with which we are familiar in the case of these persons when their children fall ill and die owing to medical aid not being summoned, but for the fact that on this occasion not one but two children had lost their lives. One of these, a little girl aged six years, had had measles and had died and the father upon his return from the inquest upon her body had found another daughter, aged 18 months, suffering from bronchitis and pneumonia, to which she also soon afterwards succumbed. It was mentioned at the second inquest that the "bishop" of the sect, a market gardener in Essex, was consulted and that prayer meetings were held for the two children all over that county in which the Peculiar People are found in considerable numbers. It should be added that in 1898 another death of one of his children had had for its result the binding over of the father to come up for judgment when called upon. It is very difficult to know what to do with the Peculiar People but it would become absolutely necessary to do something if the sect, which is not very small, were more numerous. They are of a class which is not open to reasoning when possessed of fanatical religious belief, and to punish them, apart from the question of religious persecution, neither "reforms" the character of men who have no criminal propensities nor deters their fellows. The only possible suggestion seems to be that special legislation for their benefit should enable their children to be taken from them forcibly and treated when ill, leaving them the opportunity to pray and, should it be practicable, to anoint in addition. The difficulty would, of course, lie in discovering cases of illness which the parents would take pains to conceal.

A Motor-car Danger.

A few weeks ago Mr. A. Owen Lankester, M.R.C.S. Eng., had a serious accident owing to the collision of a cab in which he was riding with a motor-car. The evidence given in support of the summons which followed showed that a fitting frequently to be observed upon motor-cars in London may at any time become the cause of a dangerous accident. Mr. Lankester's account showed that the motor-car, which was travelling at a moderate pace at 10 o'clock at night, seemed to steer straight for the cab and that, in his words, it "went for the cab like an avenging angel." The owner, who drove the motor-car, explained his action by saying that the plate-glass wind screen with which it was fitted at the particular spot where the occurrence happened reflected some arc lamps in such a manner that he could not see where he was going, and his evidence was corroborated as to this by an independent witness. Sir Albert de Rutzen was of opinion that the defendant should have pulled up when he found that the wind screen prevented him from seeing and imposed a fine of £5 with £3 costs. It certainly seems right that anyone choosing to drive behind a sheet of plate-glass, which from other causes as well as the reflection of street lamps may lessen his power to see his way clearly, should take the consequences when an accident results. The driver, at any rate, should have no such obstruction in front of him and all such apparatus lays its user open to the observation that it is only necessary when there is an intention to drive at a speed considerably exceeding that of horsed vehicles.

The Trial of Mr. G. R. Adcock.

The trial of Mr. George Robert Adcock, M.R.C.S. Eng., L.R.C.P. Lond., indicted at the Old Bailey for the manslaughter of Major John Nicholas Whyte, D.S.O., ended last week in the jury disagreeing and being discharged without arriving at a verdict. The case has been fully reported in the newspapers and has excited widespread attention because of its sensational events, with the result that the real questions at issue have been obscured. The facts show briefly that having met with a hunting accident and fractured his spine Major Whyte underwent an operation performed by Sir Victor Horsley, under whose care and under that of other medical men he was at one time making fair progress towards recovery, the measure and duration of the recovery being necessarily a matter of opinion. At this time there was no reason to anticipate that his life would be endangered, when falling in with a person professing belief in "Christian Science" he allowed himself to be persuaded to dismiss his medical attendants and to submit himself to the ministrations of "Christian Science healers." In their hands an ordinary sequence of preventable complications ensued and he died a lingering and painful death from blood poisoning. At a certain point in the later stages of his illness Mr. Adcock undertook duties of some kind in connexion with his case, the nature of the duties thus undertaken constituting the principal question which the jury had to decide at the recent trial. Mr. Adcock was formerly a practising medical man and had a respectable amount of practical experience. Recently he had, however, abandoned medical practice under the influence of "Christian Science," these tenets having, he said in evidence, cured him of the morphine habit. If Mr. Adcock behaved in connexion with the deceased as apparently he did behave, being a medical man, and after being called in to treat him as such, his trial upon the charge of manslaughter would have been considerably simplified. But it was urged in his defence that Major Whyte had declined to have anything to do with anything but "Christian Science" and that Mr. Adcock had professed to supply, and had supplied nothing more than, "Christian Science" aid. The jury accordingly had to determine whether there existed between Mr. Adcock and the deceased the relations of medical man and patient, and if so whether by neglecting to use ordinary care and skill the former had been guilty of a breach of duty which had accelerated the death of the latter. Upon these points they failed to arrive at a unanimous conclusion and the case has been adjourned until the next sessions. Mr. Justice Bigham, the judge before whom the case was heard, has since publicly stated his opinion that a conviction would be undesirable and that the evidence was not sufficient to bring guilt home to the man. It rests now with the Attorney-General to decide as to what course the prosecution will pursue. In the circumstances comment upon the trial is, of course, out of the question.

Looking Back.

FROM

THE LANCET, *SATURDAY*, July 5th, 1828.

MERCURY USED AS A PREVENTIVE AGAINST THE PLAGUE.

M. MOREAU DE JONES has communicated the following information to the Royal Academy of Sciences, of Paris. An Ionian boat having had intercourse with a Turkish vessel, the master of the boat became affected with plague, and in this state arrived at Cephalonia, where he and the boat's crew were put into the Lazaretto. The English surgeon of the Lazaret, conceiving that the crew of the boat had received the contagion, put them all, to the number of twelve, on an active course of mercury, internal as well as external. The whole of the boat's crew were successively attacked with plague, but with a remarkable difference in the degree of intensity. The master, and one of the crew, who had not experienced any sensible effect from the mercury, died of the disease. The other ten became salivated, and had the disease in a mitigated form. They all recovered.

This remarkable event, says M. De Jones, naturally leads us to conclude that the escape of ten out of twelve was owing to the influence of the mercury; a conclusion strengthened by the fact that the two who died could not be brought under mercurial ptyalism. He observes that mercury was administered in the plague which desolated Malta in 1818; but it was given during the existence of the disease with the hope of *curing* it, and not as a *prophylactic* —which makes a great difference in the result. M. De Jones recommends mercurial frictions to be used in preference to the internal use of mercury, as a preventative, the former not being liable to objection on the score of irritating the stomach and bowels.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts, additional to those already announced in THE LANCET, received at the Mansion House up to Tuesday evening, when the sum paid in was about £34,000.

	£	s.	d.
St. Peter's, Vere-street, per Canon Page-Roberts	613	0	0
Sir Savile Crossley, Bart., P.C.	500	0	0
St. George's, Hanover-square, and St. Mary's, Bourdon-street	316	0	0
Essex Unitarian Church, Kensington	214	0	0
Church of the Annunciation, Marylebone	214	0	0
St. Paul's, Portman-square	212	0	0
Holy Trinity, Brompton	198	0	0
St. Mark's, Hamilton-terrace	190	0	0
Westminster Abbey	162	0	0
St. Peter's, Brockley	131	0	0
All Souls, Hampstead	130	0	0
Christ Church, Gipsy Hill	130	0	0
St. Alban's, Streatham	123	0	0
Holy Trinity, Sydenham	121	0	0
St. John the Evangelist, Penge	119	0	0
Hampstead Parish Church	118	0	0
St. Anne's, Soho	117	0	0
St. Bartholomew's, Sydenham	110	0	0
Blackheath Congregational Church	108	0	0
Christ Church and St. Savour's, Ealing	108	0	0
Corporation of the City of London	105	0	0
St. Barnabas's, Kensington	104	0	0
Immanuel Church, Streatham	92	0	0
St. John's Presbyterian Church, Forest Hill	90	0	0
Regent-square Presbyterian Church	88	0	0
St. James's, Muswell Hill	72	0	0
Windsor-road Lutheran Church, Denmark Hill	72	0	0
St. James's, Clapham Park	70	0	0
Stamford Hill Congregational Church	66	0	0
St. Margaret, Lothbury	63	0	0
Christ Church, Crouch End	61	0	0
St. James's, West Hampstead	61	0	0
St. Mary's, Lewisham	59	0	0
St. Saviour's, Upper Chelsea	58	0	0
Highgate Presbyterian Church	56	0	0
Box outside Mansion House	54	0	0
Greenwich Parish Church and Chapels of Ease	51	0	0
Crouch Hill Presbyterian Church	49	0	0
All Saints, Notting-hill	49	0	0
Hendon Parish Church and Christ Church	47	0	0
Christ Church, Highbury	46	0	0
St. Anselm's, Davies-street	45	0	0
Ferme Park Baptist Chapel	44	0	0
St. Augustine's, Kilburn	43	0	0
St. Mary Magdalene's, Wandsworth	43	0	0
Holy Trinity, Upper Tooting	42	0	0
St. John's, Redhill	41	0	0
Christ Church, North Finchley	40	0	0
Finchley Parish Church	40	0	0
St. Mary Magdalene's, Munster-square	40	0	0
Metropolitan Tabernacle	40	0	0
Gordon-square Catholic Apostolic Church	40	0	0
Trinity Presbyterian Church, Clapham	40	0	0
Trinity Presbyterian Church, Bromley	40	0	0
St. Augustine's, Honor Oak Park	38	0	0
St. Mildred's, Lee	38	0	0
St. George's, Campden-hill	37	0	0
St. Stephen's, Hampstead	37	0	0
St. Paul's, Forest Hill	36	0	0
Acton Parish Church	36	0	0
St. Mark's Presbyterian Church, Greenwich	35	0	0
St. John the Baptist's, Chipping Barnet	35	0	0
Bromley Wesleyan Church	35	0	0
St. John Baptist, Pinner	33	0	0
Trinity Presbyterian Church, Notting-hill	32	0	0
All Saints, Hatcham	32	0	0
St. Mary's, Islington	31	0	0
Marylebone Presbyterian Church	31	0	0
St. Christopher's, Haslemere	29	0	0
St. Luke's, West Norwood	29	0	0
St. Jude's, West Chelsea	29	0	0
Lewisham High-road Congregational Church	29	0	0
Streatham-hill Congregational Church	29	0	0
St. Anselm's, Pinner	29	0	0
All Saints, West Dulwich	28	0	0
Christ Church, Greenwich	28	0	0
Trinity Presbyterian Church, Hampstead	28	0	0
All Saints, Putney	28	0	0
Barnes Parish Church	27	0	0
Collected at Aerated Bread Co.'s Depôts	27	0	0
Keston Parish Church	27	0	0
Park Chapel, Chelsea	27	0	0
St. Peter's, Clapham	27	0	0
St. Barnabas's, Clapham Common	27	0	0
All Saints, Leyton	26	0	0
All Saints, Norfolk-square	26	0	0
St. Andrew's, Whitehall Park	26	0	0
Christ Church, Southgate	26	0	0
St. Martin's, West Acton	25	0	0
Chigwell Parish Church	25	0	0
St. John's, Potter's Bar, and Wrotham Park Chapel	24	0	0
Clapton Park Congregational Church	24	0	0
Garrison Churches, Woolwich	24	0	0
St. Philip's, Sydenham	23	0	0
Emmanuel Church, West Dulwich	23	0	0
St. Paul's, Upper Holloway	23	0	0
St. Cyprian's, Brockley	22	0	0
St. Mary Aldermanbury	22	0	0
St. Mary Magdalene's, Islington	22	0	0
St. Peter's, Fulham	22	0	0
Orange-street Congregational Church	22	0	0
St. Matthew's, Redhill	22	0	0
St. Mark's, Tollington Park	22	0	0
Muswell Hill Congregational Church	21	0	0
St. John's, Upper Holloway	21	0	0
St. Michael and All Angels, Bedford Park	21	0	0
West Hackney Parish Church	21	0	0
The Vintners' Company	21	0	0
Upminster Parish Church	21	0	0
All Saints, Child's Hill	21	0	0
All Saints, Camberwell	21	0	0
Rectory-place Congregational Church	20	0	0
Christ Church, Trent Park	20	0	0
St. Laurence's, Catford	20	0	0
Bromley East, Parish Church	20	0	0
Christ Church, Enfield	20	0	0
Whitefield's Tabernacle, Tottenham Court-road	20	0	0
St. Peter's, Clerkenwell	20	0	0
St. Mark's, Notting-hill	20	0	0
Leytonstone Congregational Church	20	0	0
Westminster Cathedral	20	0	0
St. Peter's, Highgate (Men's Service)	12	0	0

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8441 births and 3762 deaths were registered during the week ending June 30th. The annual rate of mortality in these towns, which had been equal to 12·9 and 13·2 per 1000 in the two preceding weeks, fell last week to 12·4, a considerably lower rate than on any previous week of this year. During the 13 weeks of the past quarter the death-rate in these towns averaged only 14·9 per 1000; in London the rate in the same period was even slightly lower—namely, 14·8. The lowest death-rates during last week in the 76 towns were 5·2 in Tottenham, 6·4 in East Ham, 6·6 in Hornsey and Reading, and 6·8 in Grimsby; the rates in the other towns ranged upwards to 16·2 in Halifax, 16·3 in Manchester, 16·7 in Ipswich, 18·2 in Middlesbrough, 19·2 in Oldham, and 21·5 in South Shields. The 3762 deaths in the 76 towns showed a decline of 253 from the low number returned in the previous week, and included 372 which were referred to the principal epidemic diseases, against 372 and 380 in the two preceding weeks; of these, 126 resulted from measles, 74 from diarrhœa, 62 from whooping-cough, 57 from diphtheria, 32 from scarlet fever, 21 from "fever" (principally enteric), and not one from small-pox. The deaths from these epidemic diseases were equal to an annual rate of 1·2 per 1000 in the 76 towns the same rate prevailing in London. No death from any of these epidemic diseases was registered last week in Bournemouth, Southampton, Northampton, Ipswich, Devonport, or in eleven other smaller towns, whereas they caused death-rates exceeding 2·5 per 1000 in Liverpool, Leyton, Manchester, Salford, Halifax, and Burnley. The highest death-rates from measles occurred in Huddersfield, Leyton, Manchester, Halifax, and Burnley; from diarrhœa in Handsworth and Wigan; and from whooping-cough in Bootle. The fatal cases of diphtheria showed the largest proportional excess in Salford and Hull; and scarlet fever caused six deaths in Sheffield, five in London, and three in Manchester. The 21 deaths from "fever" showed a further increase upon the low numbers returned in recent weeks, and included nine in London and two in Liverpool. The 11 cases of small-pox under treatment in the Metropolitan Asylums hospitals at the end of last week were fewer by two than the number at the end of the previous week, no new case having been admitted during the week. The number of scarlet fever cases under treatment in these hospitals and in the London Fever Hospital on Saturday, June 30th, was 2752, showing a further increase of 60 upon recent weekly numbers; the new cases admitted during the week were 366, against numbers increasing from 312 to 380 in the four preceding weeks. The deaths referred in London to pneumonia and other diseases of the respiratory organs, which had steadily declined in the ten preceding weeks from 399 to 137, further fell last week to 132 and were 33 below the

corrected average for the corresponding week in the four preceding years 1902–05. The causes of 41, or 1·1 per cent., of the deaths registered in the 76 towns during the week were not certified either by a registered medical practitioner or by a coroner; in London the cause of but two of the 1060 deaths were not duly certified. All the causes of death was duly certified in Manchester, Leeds, Bristol, Bradford, Newcastle-upon-Tyne, and in 50 other smaller towns. The proportion of uncertified deaths showed, however, a marked excess in Reading, Birmingham, Liverpool, Bootle, Sunderland, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 15·6, 15·8, and 16·0 per 1000 in the three preceding weeks, declined to 14·5 in the week ending June 30th, which exceeded by 2·1 the exceptionally low rate in the 76 large English towns but was considerably lower than the rate in these Scotch towns in any previous week of this year. The rates in the eight Scotch towns last week ranged from 11·9 and 12·0 in Aberdeen and Leith, to 15·2 in Dundee and 21·1 in Perth. The 497 deaths in the eight towns showed a decline of 50 from the number returned in the previous week, and included 22 which were referred to diarrhœa, 11 to measles, 10 to "fever," nine to whooping-cough, six to diphtheria, three to scarlet fever, and not one to small-pox. In all, 59 deaths resulted from these principal epidemic diseases, showing a decline of 10 from the number in the previous week; they were equal to an annual rate of 1·7 per 1000, which was 0·5 above the mean rate during the week from the same diseases in the 76 English towns. The 20 deaths attributed to diarrhœa in the Scotch towns were five fewer than those in the previous week and included nine in Glasgow, seven in Edinburgh, and three in Aberdeen. Of the 11 fatal cases of measles seven occurred in Glasgow and three in Edinburgh; and of the 10 deaths referred to "fever" nine were returned in Glasgow, of which latter eight were certified as fatal cases of cerebro-spinal fever. Of the nine deaths from whooping-cough four were returned in Glasgow and three in Aberdeen; and of the six from diphtheria four in Glasgow and two in Edinburgh. Two of the three fatal cases of scarlet fever occurred in Glasgow. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 95, 80, and 69 in the three previous weeks, further declined last week to 64, and were four below the number returned in the corresponding week of last year. The causes of 19, or 3·8 per cent., of the deaths registered in the eight towns last week were not certified, the proportion of uncertified deaths in the 76 large English towns during the same week being only 1·1 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 16·4 and 20·2 per 1000 in the two preceding weeks declined again to 16·4 in the week ending June 30th. During the 13 weeks of the past quarter the death-rate in the city averaged 21·4 per 1000, against 14 8 in London and 17·1 in Edinburgh. The 119 deaths of Dublin residents during last week showed a decline of 28 from the number returned in the previous week, and included two which were referred to "fever," two to diarrhœa, one to whooping-cough and not one to measles, scarlet fever, diphtheria, or small-pox. These five deaths from epidemic diseases were equal to an annual rate of but 0·7 per 1000, the rate from the same diseases being 1·2 in London and 2·3 in Edinburgh. The two fatal cases of "fever" in Dublin last week showed an increase upon recent weekly numbers. The 119 deaths from all causes in Dublin included 12 of infants under one year of age and 27 of persons aged upwards of 60 years; both these numbers showed a considerable decline from those returned in the previous week. Three inquest cases and three deaths from violence were registered, and 42, or 36 per cent., of the deaths in the city occurred in public institutions. The causes of four, or 3·4 per cent., of the 119 deaths were not certified by a registered medical practitioner or by a coroner, the proportion of uncertified deaths being but 0·02 per cent. in London and 3·1 in Edinburgh.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Deputy-Inspector-General J. O. B. Williams to Chatham Hospital (temporary). Surgeon E R. Townsend to the *Sapphire*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel William T. Johnston retires on retired pay (dated July 4th, 1906).

Lieutenant-Colonel W. L. Reade, from Bangalore, takes over the office of Senior Medical Officer, Madras Brigade. Captain S. A. Archer is appointed for duty in the Dublin district.

INDIAN MEDICAL SERVICE.

Colonel T. J. H. Wilkins, principal medical officer of the Burmah Division, has been transferred to the Secunderbad Division as principal medical officer, vice Colonel A. F. Dobson, retired; Lieutenant-Colonel W. O'Hara has been appointed principal medical officer, Bangalore and Southern Brigades; and Lieutenant-Colonel N. Chaterjie has been appointed to officiate as principal medical officer of the Burmah Division.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain John S. Mackay to be Surgeon-Major (dated June 23rd, 1906); Surgeon-Lieutenant Leonard A. Avery to be Surgeon-Captain (dated June 24th, 1906).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cheshire: Surgeon-Major A. M. Archer is granted the honorary rank of Surgeon-Lieutenant-Colonel (dated June 29th, 1906). Surgeon-Major and Honorary Surgeon-Lieutenant-Colonel A. M. Archer resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated June 30th, 1906).

Rifle: 1st Volunteer Battalion the Leicestershire Regiment: William Frederick McAllister-Hewlings (formerly Captain) to be Surgeon-Lieutenant (dated June 30th, 1906).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Gloucester and Somerset Bearer Company: Captain A. W. Dalby to be Major (dated June 30th, 1906).

THE BIRTHDAY HONOURS.

The list of Birthday Honours included the names of Deputy Surgeon-General John McNeale Donnelly, C.B., I.M.S., retired, and Surgeon-General Alfred H. Keogh, C.B., Director-General of the Army Medical Service, who have been promoted to be Knights Commanders of the Bath; of Surgeon-General W. Simson Pratt, A.M.S., P.M.O. of the Southern Command; and Colonel H. Kellock M'Kay, C.I.E., I.M.S., who receive Companionships of the Bath; and of Lieutenant-Colonel David Prain, I.M.S., Director of the Botanical Survey of India, who is made a Companion of the Order of the Indian Empire.

RESERVISTS AS SANITARY INSPECTORS.

Dr. J. S. Purdy writes to us as follows: "If the Local Government Board recognised a diploma in Sanitation gained by a non-commissioned officer in the army by passing an examination equivalent to that prescribed by the Sanitary Institute I am sure that not only would the country benefit by reservists being eligible for appointments as civil sanitary inspectors but also great encouragement would be given to the study of hygiene in the army, more especially among the men of the Royal Army Medical Corps. One of the most efficient sanitary inspectors I ever knew was an ex-sergeant, *sans* diploma, at Tottenham. Men trained in the army are disciplined and do what they are told, and do not as civilians are more apt to do, show a tendency either to pose as amateur experts on medical subjects or exceed orders. In a recent conversation with Colonel Hamilton, I.M.S., he expressed himself as favourable to the idea, so I trust that other men in the Army Medical Service will assist in bringing the subject to the notice of the authorities. The fact that a course of hygiene at the Royal Army Medical College qualifies an officer to sit for the D.P.H ought to be sufficient precedent for allowing a non-commissioned officer of the same corps to sit for the sanitary diploma prescribed for civil inspectors." There is sound good sense in Dr. Purdy's views. And the more our army, from top to bottom, becomes familiar with the precepts of sanitary teaching, the

greater will be the chances of the men escaping during times of war from the horrors of epidemic disease. We understand that Colonel Hamilton intends to bring the subject before the War Office.

MEDICAL SCIENCE IN WAR.

Mr. Brodrick's letter to the *Times* of June 6th under the heading of "Medical Science and Military Strength" did good service in arousing public attention and in eliciting some strong expressions of opinion as to the limitations under which medical science labours in actual war. While gratefully recognising the great services which the late Secretary for War had rendered in the way of improving the Royal Army Medical Corps we said that the Army Medical Service was still not an ideal one. In Mr. Brodrick's scheme the Director-General of the Army Medical Service had a place on the Army Council. He has since been relegated to a far more subordinate position in the Adjutant-General's Department. Now everything in war depends upon preparedness and the views and recommendations of the medical service on questions of such importance as the sanitation and health of the army in preparation for war should be of a direct and personal kind and not have to be filtered through any one of the heads of departments. The functions and responsibilities of a director-general as the representative of the Army Medical Service are of an altogether exceptional and responsible kind, and nowadays, as we all know, it is not the adjutant-general or head of any other War Office department who is blamed in case of any medical failure in a campaign but the medical service itself. Although it may have had an amount of responsibility out of all proportion to any power which it may have possessed to alter or to control the course of events, the medical service may confidently count upon having all, or an undue share, of any blame in the future. Army retrenchment is apparently the order of the day but the present Secretary of State may still give heed to the lessons of our past medical experience in war and make some announcement thereon in his forthcoming statement about the army.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The June number of this journal, edited by Colonel David Bruce, R.A.M.C., C.B., F.R.S., is a very good one. It contains a number of papers on a variety of subjects of scientific, army medical, and current interest, together with the usual corps news.

NEW CHIEF FOR RUSSIAN MILITARY MEDICAL ACADEMY.

The committee of senior ordinary professors has chosen A. Ya. Danielieffsky, now occupying the chair of Medical Chemistry, as principal of the Military Medical Academy, The *Pharmazevtitcheski Journal* adds to this information that Professor Danielieffsky was a student in the Imperial University of Kharkoff. He was appointed Extraordinary Professor of the University of Kazan in the chair of Medical Chemistry and Physics in 1865. After being transferred to the chair of Pharmacology in 1868 he again took the chair of Physiological Chemistry. He was professor of Medical Chemistry in Kharkoff from 1885 to 1892, since which year he has occupied a similar position in the Military Medical Academy.

Major F. A. Saw, R.A.M.C., who has recently retired on retired pay, served in the operations in South Africa under Sir Frederick Carrington in medical charge of the Mashonaland Field Force, which suppressed a native rebellion in 1896 (medal and clasp), and also during the campaign of 1899 to 1901 (medal and clasp). At the fight at Stormberg we understand he brought in the wounded in the only ambulance wagon then available.

INTERNATIONAL EXHIBITION OF HYGIENE, MONTEVIDEO.—We are informed by the Consul-General for Uruguay that an International Exhibition of Hygiene will be annexed to the Third Latin-American Medical Congress, to be held in Montevideo, in the Republic of Uruguay, from Jan. 13th to 20th, 1907. The exhibition will last two months and will comprise exhibits of apparatus, models, foods and drinks, industrial, chemical, and pharmaceutical products, medical, surgical, and orthopædic apparatus, and industrial processes relating to hygiene and presented for commercial purpose. Firms wishing to register their names as exhibitors should apply by writing to the Secretary-General of the Congress, Palacio del Ateneo, Montevideo, before Sept. 1st.

Correspondence.

"Audi alteram partem."

THE CAUSES OF LEPROSY.

To the Editors of THE LANCET.

SIRS,—I have to thank you warmly for the able and comprehensive review of my book on Leprosy which appeared in THE LANCET of June 16th and also for your very kindly references to myself. The spirit of candid inquiry and of desire for the truth which your article manifests encourages me to hope that you will not be unwilling to allow me to answer briefly the objections which your reviewer specifies against the creed which I advocate. Several of my critics who have avowed themselves not wholly convinced have been content with the vague statement that there are weak points in the arguments, without naming any one of them. You have, on the contrary, in a manner which shows much familiarity with the subject, stated clearly in what respects the suggestion of the fish-food causation of leprosy appears to be unsupported by facts. I am especially glad that this has been done, because I feel confident that only a very few words of explanation as regards each several allegation are needed.

To take first the statement that Dr. Francis Day whilst travelling in Burmah never saw a case of leprosy although the Burmese are fond of fish. The simple fact is that although Dr. Day did not see them there were plenty if they had been looked for. I answered Dr. Day's most careless statements a quarter of a century ago. He made the same assertion as regards the Straits Settlements at a time when in reality there were many lepers there. Dr. Day was a good naturalist and an authority on fish, but he did not inquire as to leprosy. It is easy enough for a traveller to see nothing of this disease unless he searches for it, and others besides Dr. Day, even some who have resided long in Burmah, have made similarly absurd statements. There is, however, not the slightest doubt as to the facts. The Burmese eat much bad fish and they have a great deal of leprosy.

In reference to Dr. Vincent Richards's conclusions I have much pleasure in agreeing with you that he was an able and painstaking inquirer but he collected his statistics on the erroneous assumption that if leprosy were due to fish it ought to prevail most where fish food is most abundant. Paradoxical as at first sight it may appear, there are many conditions in which the reverse is true. It is not the quantity but the quality of the fish which is in question. Dr. Richards wrote two reports. Your reviewer has perhaps seen only the first. In the second he admitted that the facts "*certainly seem to indicate that the consumption of fish does exercise some influence in producing the disease.*"

As regards the Sandwich Islands, the balance of evidence is, I believe, to the effect that in them, as in most of the Pacific groups, leprosy has always been an indigenous disease. I may admit, however, that it did not prevail extensively until the advent of Europeans and Chinese, and also that prior to that advent a great deal of fish was eaten. Let us ask, however, in what condition was it eaten? As your reviewer is careful to state "especially raw." Now, fresh raw fish is not suspected as a cause of leprosy, and it is on record that the islanders never practised fish-curing in any form and that they would eat their fish as soon as taken out of the water and almost before it was dead. It was the immigrant Chinese and Europeans who introduced the practice of curing, and it is very possible that some of the Chinese may have been lepers and may have tainted the food which they handled. At any rate they introduced the practice of fish-curing with all its risks.

I will not say anything more as to the denials of fish-eating by Indian lepers and others, than that I think that I have produced sufficient evidence that their statements are not in the least trustworthy (see page 155 *et seq*). You write, quite correctly, that "caste ordinances again militate against the use of fish in many who have become lepers." It is true that they do "militate against it," but they do not wholly prevent it, and it is unquestionable that throughout India the castes which are professedly vegetarian suffer far less than others.

You cite the well-known case recorded by Dr. Benson and those by Professor W. Osler as if they were proofs of the

occasional contagiousness of leprosy. If, however, we make a clear distinction between skin-contagion and communication by the mouth, are they of any value? Is it not in the Dublin case quite likely that the brother who contracted the disease, as is supposed, from wearing his leprous brother's clothes, also exposed himself to risk by taking food which had been touched and contaminated? The two brothers lived together in a peasant's cabin and very probably used the same drinking vessels, knives, spoons, &c. The possibility of skin contagion—which perhaps ought alone to be called "contagion"—is discredited by a thousand facts, whilst the reality of mouth-communication (i.e., by food) is, I think, doubted by none. To which then ought we to refer these very exceptional facts?

As regards the failure or otherwise of segregation measures, it is too large a subject for me to discuss in a letter. I must be content to observe respecting the asserted increase in Madagascar that it may have been due to increased facilities for the transport of fish. I possess a good deal of information as regards that island but there is scarcely any place in the world from which I should less hopefully expect any trustworthy data as to the prevalence and causes of leprosy. It has been asserted respecting many other places that the disease increased when segregation was neglected but the fact is that it has often died out under absolute neglect of it and as often thriven in spite of its energetic enforcement. It is increasing now in Cape Colony, &c., in spite of the enforcement of cruel laws and it is steadily dying out in Norway although the number of those segregated has been diminishing. In the latter country registration and good advice as to eating, &c., would appear to be all that is needed. The leper is allowed to remain at home with his friends and the miseries of such places as Robben Island are unknown there.

I am, Sirs, yours faithfully,

June 30th, 1906. JONATHAN HUTCHINSON.

HYGIENIC MEASURES AGAINST SYPHILIS.

To the Editors of THE LANCET.

SIRS,—In Dr. B. Leppington's criticism of Professor Metchnikoff's third lecture (on syphilis) it is possible to agree with him in his warnings as to the incompleteness of the experiment. Dr. Leppington, however, speaks of Professor Metchnikoff's "parrot's" cry "that hygiene must be paramount over morality" and then asks what Professor Metchnikoff means by morality? He answers, Professor Metchnikoff "evidently means that the combat with disease is to be unflinchingly carried on by means which involve a definite deterioration of public morality." Dr. Leppington then says "the supreme ally of the hygienist is a rising level of morality, which by diminishing the area of vice diminishes the difficulty attending the campaign against the consequences of vice," and finishes by saying "that every hygienist who casts contempt against virtue is adding to the momentum of forces against himself." The implication of all this is that Professor Metchnikoff is engaged in a work that will lead to a dimini-hed public morality; that he regards virtue of little value, and thus in the end will defeat his own aspirations.

Professor Metchnikoff needs no one to defend him, but Dr. Leppington's own views may be examined. He alleges (without proof) that the disease he is dealing with springs largely out of moral weakness. Does it? I am prepared to deny this. What is morality? Is it not the habit or way of life which conduces to the well-being of society and "ultimately is a matter of organisation, of instinct rather than of ratiocination? A knowledge of moral precepts, whether culled from works on ethics or heard in sermons, never made people moral, and never will. It is the ever present forces of life, heredity surroundings, that determine conduct, and the only way of affecting conduct for the better is by modifying the influence on human nature of those forces that are persistent and inescapable."

It may be very flattering to those of us who have not contracted syphilis and who have not perhaps been where it could be acquired to regard ourselves as morally strong. But our every action is governed by inflexible laws. The man with strong desires, whose motives to gratify those desires are stronger than any other he possesses, will gratify them so long as there is an opportunity irrespective of the consequences. The man whose desires are not so strong, whose dread of the consequences is greater than any pleasure he would derive from gratifying them, will not do so, but it is beside the question to say the one is morally strong and the other morally weak. It is sheer wrong-headedness not to recognise the fact that we cannot end the desires of either sex and that all we can do where their gratification leads to disease is to limit the baneful effects as much as possible.

The question now arises, Who people the places where syphilis can be contracted? Not men who are morally weak (whatever that means) but men whose sexual desires are strong. As for the women, let Dr. Leppington read the words that Mr. Upton Sinclair in "The Jungle" puts into the mouth of Marija. We have it also on the authority of Lady Jeune that women sell their bodies for bread. So long as our present social conditions continue crushing and condemning millions to starvation so long will there be bodies for sale. The true remedy is that which shall prevent poverty and the day of that remedy is coming, is nearing, is at hand. For the present, however, we are restricted to "regulation" or "abolition." If it can be shown that "abolition" diminishes the amount of syphilis we should all be abolitionists. If, however, it simply serves to scatter the disease far and wide on the innocent as well as the "guilty," surely we should all be "regulationists." But it may be argued that that is legalising vice. It may be so, but we have had to legalise drinking and other "vices." It is also said "inspection" demoralises, but it is sheer silliness to say that one who has to submit to the embraces of a dozen strangers every night is demoralised by the visit of a medical man once or twice a week. What, then, of the morality, or rather *immorality*, of those who, like Dr. Leppington, because regulation does not stamp syphilis out, are prepared to let each unfortunate act as a focus of disease in the district in which she lives, infecting and damning innocent women and children? Surely the unborn have the strongest claim upon us because of their innocence and helplessness. It is not necessary to despise those of our sisters who have to submit to inspection—the man who does so shows he has much to learn. We can feel for them and the stronger we feel the harder we will work for the abolition of that competitive system which is flinging millions on the street. Till that day dawns when the evils we speak of will have righted themselves no one has a right to speak of men like Professor Metchnikoff as casting contempt against virtue. The immoral man is not Professor Metchnikoff but he who would so order things as not to lead to the highest well-being of society.

I am, Sirs, yours faithfully,

Liverpool, July 1st, 1906. C. R. NIVEN.

THE ALLEGED GROWTH OF INSANITY.

To the Editors of THE LANCET.

SIRS,—Dr. D. Nicolson in an interesting and suggestive letter published in THE LANCET of June 9th quotes from the last annual report of the Commissioners in Lunacy a statistical statement with reference to the increase in the number of the insane under their surveillance in England and Wales between Jan. 1st, 1869, and Jan. 1st, 1904—namely, from 53,177 to 119,829. The sentence containing this statement quoted by Dr. Nicolson is: "In spite of this large numerical increase, it will be found that when considered in relation to the growth of population the proportion of insane has *not* increased as much as the population." Your correspondent states with regard to this quotation: "With this definite expression of opinion on the part of those who are in the best position to know I am content to leave this aspect of the question." I do not, of course, presume to judge what precise signification Dr. Nicolson attaches to what he describes as a "definite expression of opinion" by the Commissioners in Lunacy, but it seems more than probable that this, to me, meaningless statement of the Commissioners might lead many to believe that the rate of increase of the insane under their control between 1869 and 1904 was not so great as the rate of increase of the population. What are the facts of the case as stated by the Commissioners? The numerical increase of the insane during these 35 years was 125·3 per cent. and the numerical increase of the population during the same period was only 53·6 per cent. Thus the number of the insane increased more than twice as rapidly as the population. If, however, the increase of population be taken into

account, the ratio or proportion of the insane to the population showed an increase of only 46 6 per cent. during the 35 years. Any attempt to compare the numerical increase of the population with the increase in the ratio of the insane to the population is not only statistically fallacious but is absolutely meaningless.

We are faced with the grave fact that the ratio of the insane under the control of the Commissioners in Lunacy to the population of England and Wales showed an increase of 46·6 per cent. during the 35 years under notice and this fact has to be met and explained by those who, like Dr. Nicolson and myself, believe that it does not necessarily imply an increasing rate of occurring cases of real insanity.

I am, Sirs, yours faithfully,

Surbiton, June 28th, 1906. NOEL A. HUMPHREYS.

THIOSINAMINE INJECTIONS.

To the Editors of THE LANCET.

SIRS,—In the report of the meeting of the Dermatological Society of London in THE LANCET of June 30th, p. 1833, there is an error as to duration of the treatment by thiosinamine injections of the hypertrophied scars resulting from serious burn. The case was treated by me for two years, not five. The results have been excellent.

I am, Sirs, yours faithfully,

Harley-street, W., June 30th, 1906. GEORGE PERNET.

CEREBRO-SPINAL FEVER.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 30th, p. 1860, reference was made to the memorandum recently issued by the health committee of the Glasgow town council on the above subject and with your permission I should like to extend the description of the rash there given in the light of a recent observation. As stated in my memorandum two of the cases therein described presented in addition to herpes on the lips "a few spots petechial in character, few in number, and irregularly distributed ..... more pronounced than a typhus rash, and much more limited in distribution." This description was taken from two cases, which alone of those within my knowledge at the time presented anything of the nature of a rash.

During last week, however, there was admitted to Belvidere Hospital a child, aged seven months, in whom the features of a typhus rash were exactly reproduced within limited areas of the skin—that is, on the fourth day from the onset of the symptoms a rash was present which in areas of the skin of the thighs and abdomen limited to about two palms' breadth appeared to Dr. J. Brownlee, the physician-superintendent, and to myself to present no features by which it could be distinguished from that of typhus fever. It had the appearance of a subcuticular stippling which could be obliterated on pressure and it was only on looking beyond the limits of these areas that discrete purpuric spots could be observed such as alone had been present in the cases described in my memorandum and which bore no resemblance to any of the features of a typhus rash. The subcuticular stippling in the latter case was pretty generally distributed.

I shall be glad if you can find room to insert this in an early issue. I am, Sirs, yours faithfully,

Glasgow, July 3rd, 1906. A. K. CHALMERS.

THE CONDITION OF THE VESSELS DURING SHOCK.

To the Editors of THE LANCET.

SIRS,—I should like to be allowed to make some remarks on Mr. W. Sheen's paper,[1] in which he suggests a theory that might bring the views I have advanced[2] on the condition of the blood-vessels during shock into harmony with those of Dr. W. G. Crile, as so ably set forth and supported by Mr. J. P. Lockhart Mummery.[3]

Mr. Sheen, as I understand him, agrees with me that the superficial vessels are not dilated during shock and his theory is that their condition may be one of relaxation without extension. He suggests that a pressor action first occurs. Afterwards "the vaso-constrictor impulses pass off and vaso-dilator impulses reach the vessels. But they cannot dilate, because there is no blood to fill them, the blood being already accommodated in the portal system and elsewhere."[4] That the vessels might be paralysed but not dilated seems to me the only possible explanation of the phenomena observed, *if the vessels are paralysed.* But shock, as I have observed it, has usually been induced slowly. Hence, by Mr. Sheen's view, it must be believed that the blood gradually collects in the internal areas and Dr. Crile asserted that the blood pressure became raised in the portal vein. If at the same time the systemic vessels become paralysed but do not dilate the conditions must be eminently calculated to lower the resistance to the blood flow in the systemic vessels as compared with that in the vessels of the splanchnic area. According to this view the question why, in the circumstances, the blood does not flow in the direction of least resistance so as to fill the systemic vessels seems still to require an answer.

This matter is of very great practical importance, if only because of its bearing on the administration of stimulants. Mr. Sheen does not state his view of this question, but according to Dr. Crile's theory the administration of alcoholic stimulants (vaso-dilators) is harmful during shock and the application of warmth to the surface of the body is of very doubtful utility; indeed, theoretically it also is harmful. On the other hand, if my view is right warmth and vaso-dilators are useful in theory, as I believe them to be in practice. I am, Sirs, yours faithfully,

July 2nd, 1906. JOHN D. MALCOLM.

[1] THE LANCET, June 30th p. 1885.

[2] THE LANCET, August 25th, 1905, p. 573; Brit. Med. Jour., Dec. 9th, 1905.

[3] THE LANCET, March 18th (p. 695) and 25th (p. 776), and April 1st (p. 840), 1905.

ARMY NURSING.

To the Editors of THE LANCET.

SIRS,—I have read with a great deal of interest all the articles which have appeared in THE LANCET and elsewhere *re* the "Queen Alexandra Imperial Nursing Service." As a surgeon who has had some experience of civil hospitals in this country and had a good deal to do with the management and training of nurses in colonial hospitals, as well as some unique experience both in the field and in a general hospital during the late South African War, it seems to me a great pity that there should be any falling off of male nurses in the Royal Army Medical Corps. Everyone will, of course, admit that lady nurses are absolutely necessary in military hospitals, but that is not the point. They can be recruited very largely from the large civil hospitals and from among those who have been trained in them, where it must be allowed that the nurses have a far larger field and opportunity for training than can exist in military hospitals. With regard to the male nurses, however, the case is altogether different. During war time the exigencies of the service require that the whole of the nursing at, or close to, the front should be in the hands of male nurses. There are few, if any, institutions which train male nurses and none so efficiently for the special work required of them in time of war as the military hospitals. As great a number of the men as possible of the Royal Army Medical Corps should consequently be encouraged to become efficient nurses. We should then get a large number of competent male nurses and not be left in the dire position that fell to my lot of having during a small siege lasting 12 days over 70 casualties in the first five days without the help of a single man who could even put on a bandage, as no medical orderlies could be spared to accompany that force. I am, Sirs, yours faithfully,

July 2nd, 1906. D.S.O.

[4] THE LANCET, loc. cit., pp. 1825-26.

AN UNFOUNDED CHARGE.—At the Gloucestershire quarter sessions, held on June 26th, Mr George Norman Robbins, L.R.C.P. Lond., M.R.C.S. Eng., surrendered to his bail to answer a charge of having committed an assault on a girl, aged six years, on March 18th last. The case was gone into at the last sessions but the jury could not agree. Without leaving the box the jury unanimously returned a verdict of "Not guilty," which was received with applause, and Mr. Robbins was warmly congratulated by his many friends in court.

BUSACO AND THE FUTURE OF PORTUGUESE HEALTH RESORTS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

IT is only natural that the Portuguese should expect some return for the very great and, as it proved to be, the successful effort which they made to receive worthily the Fifteenth International Congress of Medicine. The advantage that may legitimately be expected to accrue from this endeavour is that their country will be better known and appreciated by other nations. Henceforth, it is anticipated, more interest will be manifested abroad in regard to Portugal. Then as it was a medical congress which the Portuguese organised, and as medical men often have to give advice in regard to health holidays, wintering abroad, &c., it is thought that a tour in Portugal may now be more frequently suggested. It will, therefore, not be out of place to inquire how far this is likely to be the case and whether there are any obstacles to the full realisation of such a prospect. At the same time, it must be noted that before the Congress met at Lisbon the number of visitors to Portugal was increasing. Nevertheless, there can be no doubt that if the resources and the attractions of the country were better known the visitors and tourists would be counted not by hundreds but by thousands. Indeed, if it were possible to do in Portugal what has been done on the Riviera, in Switzerland, and in many of the other well-known pleasure and health resorts, there is no doubt that many thousands of British, American, German, and other tourists would annually visit the country and that to many invalids such a journey would be of great benefit. Unfortunately, the Portuguese are not a business-like people. They are capable of acquiring a considerable amount of theoretical knowledge but seem to be singularly deficient in practical sense. If this were not the case they would surely manage their own business themselves instead of calling in so much foreign aid, not merely financial aid, but that of technicians. At the same time it is to the credit of a people not to attempt that for which they are manifestly unfit. This was the secret of Japan's success. The Japanese resorted to foreign technicians till they had learnt from them all that was worth knowing.

Though the fact is not perhaps generally realised the creation of a health resort is a technique or rather a combination of many techniques. Then just as, for instance, Lancashire stands first in the world for all that relates to the technique of the cotton industries, so do the Swiss stand first in regard to the technique of hotel management and of that vast industry appropriately qualified in some French guide books as "the exploitation of the foreigner." The Riviera was not created by the natives of the Riviera, but by Swiss and German hotel-keepers, by capitalists and enterprising people who came from all parts, but especially from the north of Europe. The practical question to-day is therefore, How would the promoters of such enterprises fare in Portugal? Would they be allowed to bring prosperity to the country? The little I have seen in this respect is not altogether encouraging. There was so much to do in regard to the medical congress that I could not attempt a regular investigation as to the prospects of the health resorts of Portugal but I determined at least to visit the most remarkable spot of the entire country. This is undoubtedly the estate of the old Carmelite Monastery at Busaco. When enumerating, before the Congress met, the excursions which might be made in Portugal I briefly explained that here the monks had cultivated the plants brought over by the Portuguese explorers. Their grounds are surrounded by a wall ten feet high and, as already stated, a Bull issued by Urban VIII. in 1643 punished with excommunication anyone who injured the trees. As the wall preserving this forest is two and a half miles long there is to be found here a large plantation of gigantic trees, for many of them are several centuries old. That a considerable proportion of the trees are cedar, pine, and eucalyptus contributes to render the air pure and balsamic.

As already explained, when the monastical orders were abolished and this estate became national property a palace was built in the Emmanuel or Gothico-Manoelino style as a wedding present to H.M. Carlos I. and it is this palace which now serves as a hotel for tourists and residents. Certainly it is an imposing structure and the beautiful ornamental stone carving work is very charming. A broad gallery or cloister with pillars and arches of carved white stone goes round three of the sides of the main building. It is therefore easy to find a place in the open air where there are shade and shelter from rain or wind. Thus open air can be enjoyed even under this beautiful stone verandah or gallery on those rare occasions when bad weather prevails. The hotel is situated on the highest hill of the

FIG. 1.

The monumental palace and hotel, showing the stone carving and the sheltered gallery round the building.

neighbourhood and half an hour's climb below its summit. There are level walks skirting round the hill on either side, while there are many carriage roads and bridle paths going up or down in all directions. At every opening among the trees a fresh panorama reveals itself. It is a land of enchantment. My first impression was that I had never been to a place more eminently fitted for doing nothing whatsoever. To sit still, to breathe the fragrant air, to gaze with admiration on the scene was enough, and more than enough, for it is wonderful how soon the new-comers are overcome with the desire to sleep. This is indeed a restful place. There is no town, no traffic near at hand, nothing to disturb the quietude or to pollute the atmosphere. From the summit of the hill, immediately behind this palace and hotel, a view can be obtained that extends from the sea on the west to the first mountains of Spain which appear dimly on the horizon of the east. To the south the ancient university town of Coimbra and the Mondego valley are easily discernible, and to the west and north are long chains of pine-covered mountains. These forests keep the air delightfully cool in summer while they break the force of the cold winds in winter. For the Portuguese Busaco is a summer resort, while the British go there to escape the rigour of winter. The wonder is the extent of the panoramic views. It is impossible to count the mountains, they are like the waves of the ocean. It is altogether different from Switzerland and more like the lower Balkan ranges in Servia. The curious thing is that, though there are so many mountains, there is no sense of being shut in, but, on the contrary, that of a far-reaching expanse. It is near enough to the sea to feel some effects of the saline breezes, high enough to be always refreshed by a cool breeze, and the isolation and vegetation insure the purity and the balsamic quality of the air.

There are also numerous springs in the neighbourhood, mineral and sulphur springs, and one that professes to rival the waters of Contrexéville. Even on the estate itself there are six different springs containing more or less salts of soda which might be used to assist digestion. But, of course, before pronouncing any definite opinion on such a matter elaborate researches must be made. For the moment all that can be said is that there is reason to believe that many medicinal agencies will probably be discovered when the place is better known and developed. At the small town of Luzo is the nearest railway station, from which a short drive through a majestic forest brings one to

Busaco, while from the Busaco hotel a motor-car or an omnibus takes visitors down to the baths at Luzo. There is a bathing establishment; it is a modest structure but it contains all that is necessary. These are sulphur baths but close by there is a spring that gives forth a great quantity of carbonic acid. A small pond surrounded by a masonry wall has been made in which the people dip their buckets and jugs at the great risk of contaminating the water. It is called the fountain of San João and a little votive chapel to the saint is erected just above the spring. It was once proposed to remove the chapel, to cover over the spring, and to endeavour to bottle some of the water before all the gas which it contains escapes. The pious inhabitants were, however, greatly scandalised. They qualified such measures as a desecration and maintained, that if this was done the saint would certainly prevent the water coming any more. So, for the time, this water is lost. The upper reaches close to the chapel are contaminated by the careless way in which pitchers and pails are thrown in and the lower reaches are used by the people to wash their dirty linen. Yet, it is obvious to the naked eye that the water is rich with carbonic acid and would probably provide a very agreeable and wholesome table water.

FIG. 2.

Garden in front of the hotel showing the semi-tropical vegetation.

Curia, where the waters are supposed to rival those of Contrexéville, is somewhat farther off but nevertheless can with a motor-car be reached easily from Busaco where the accommodation and the surroundings are much more suitable for residence. Undoubtedly many people would go to Busaco if the place was better known and if the persons interested felt a sufficient security of tenure to make efforts to attract visitors. This brings me to the question raised as to whether the Portuguese themselves will aid or will impede the development of their own country. As for the people I have heard nothing but good of them, at least round about Busaco. Labour is cheap, indeed much too cheap, for it is impossible to ask people who earn so little to carry out in their homes the sanitary reforms and measures that should be introduced. The women labourers often get only about 6*d*. per day and the men twice that amount, though it is acknowledged that the women frequently do quite as much work as the men. It is true that they do not depend on such low wages for their existence, for they mostly possess some land and only hire themselves out when they have no more work to do on their own small holdings. What, however, must be the condition of those who have no property of their own to fall back upon, though fortunately this is the exception and not the rule. These people are honest, hardworking, and absolutely trustworthy. At Busaco everything is left open. No one ever thinks of locking a door. Once a year there is a great pilgrimage. Some 10 000 people come to Busaco and religious services are held in the woods and at the shrines of the ancient monks. When this is terminated there is a great feast. There are, of course, much drinking and some drunkenness, though not anything like what would result if a similar crowd went out for a picnic in England. There are a great deal of noise and some quarrelling, but knives are never used and nothing has ever been stolen.

Though the mass of the Portuguese are evidently a simple-minded trustworthy people the same cannot be said of the officials in the larger towns. One fatal circumstance is that they are not paid enough and must make money in some way or other over and above their salaries. Hence the business man who comes to Portugal is likely to be harassed and exposed to many extortions. This sort of pin-prick policy is likely to render life burdensome and to discourage enterprise. Thus, for instance, at Busaco, when the palace was given over, though but in a vague, undefined manner, as a hotel the first condition was that the State only should build. Now the granting of a permanent lease is conditional on a certain amount of building being done, but of course the tenant wants security of tenure before sinking large sums in building. At first the palace was not occupied at all. The building which is now the post-office served as a hotel. Then the Minister of War came down and said that if the palace was furnished there would be plenty of people wishing for rooms because the autumn manœuvres were to take place in the neighbourhood and thus the palace was occupied for the first time as a hotel. Afterwards, however, both the local and Lisbon authorities ordered all the furniture to be taken out. The protest that this would injure the furniture was unavailing, so the palace was dismantled. Subsequently, many of the people who had been there wanted to return but it was impossible to receive them. If I am not mistaken, the King himself finally took the matter in hand and permission was given to put the furniture back. Nevertheless, to this day there is no permanent agreement or lease.

This monumental hotel, which is much more of a monument than a hotel, contains 46 rooms of which only 22 are available for visitors, the others being mostly servants' rooms, and there are 20 rooms in the annexe. Palatial drawing rooms, state halls, and stairs are very grand and pleasing in their way but they bring in no rent. It is the bedrooms that pay and, of course, a palace is not built on the business principles of a hotel. An annexe with from 50 to 100 bedrooms is needed and the offer is made to build this and to incur all the expense necessary to make a financial success of the whole affair in exchange for a 35 years' lease. After that time the whole of the property, the goodwill, and the business created is to revert to the State. Instead of this the State wants to put a sort of functionary, a forest ranger, to supervise the whole enterprise. There is no sort of evidence to show that such a functionary would possess the smallest technical knowledge of the hotel and health resort business, yet nothing whatsoever is to be done without consulting and obtaining the approval of this functionary. If a tile is blown off the roof it cannot be replaced without his consent and he may at will cause any of the servants to be dismissed. Then any and all visitors must be allowed to inspect the hotel as if it was a sort of museum. Of course, any decent person wishing to go round is shown whatever is of interest, but under the proposed agreement a person might behave uproariously or pretend to be drunk and on being refused admittance and bearing witness to that effect the Government would have the right to tear up the contract. Many other clauses place this business enterprise at the mercy of the caprice of a local functionary.

This is all a matter of more than local importance. Even under the present unstable state of affairs there have been during the last 12 months about 3000 Portuguese and 800 foreign visitors to Busaco. This is not much but it is enough to make short-sighted, inexperienced persons imagine that already fortunes are being realised and the tendency seems to be that of killing the goose that may lay the golden eggs. Yet the first step towards developing health and holiday resorts in Portugal is to give business facilities. The Portuguese know little or nothing about such business. They should, like the Japanese, welcome those who can give them the much-needed and useful object lessons, but to judge from what is happening at Busaco this is not the case. Busaco, I believe, is the nearest approach to a success in Portugal. If this is allowed to fail through harassing and unbusinesslike restrictions the hope of success elsewhere will be reduced to a minimum. On the other hand, there is much to be done elsewhere—watering stations, sea-bathing stations, sheltered winter resorts, and high altitudes for out-of-door treatment amid snow and sunshine as at Davos Platz are all available,

if men with enterprise and with the needed technical knowledge are encouraged. As for the money necessary, it can be had for the asking, if those who are to manage are persons of experience and are known to possess the special knowledge on which success depends.

So great are the attractions of Busaco that the Queen has built herself a villa close to the Hotel Palace and the King goes there also every year. Naturally the best society of Portugal follows their example; while in the early spring and late autumn there is an increasing influx of foreigners. But the accommodation is barely sufficient. Portions of the palace are not yet completed. The artist who was painting the stairs was called away to finish the new medical schools at Lisbon in time for the International Congress of Medicine and thus the scaffolding remains and has remained for many months on the stairs at Busaco. Such delays on Government premises may not matter much, but slow building operations will not help to fill a hotel. These incidents

FIG. 3.

The Queen of Portugal's villa and the chimes of the old Carmelite Monastery, with cedar trees that are some centuries old in the background.

suffice to show the lack of business knowledge and activity. If the pleasure and health resorts of Portugal are to reap the advantages which the recent International Congress of Medicine might help to bring them they must be placed under the supreme control of persons who possess the special and necessary business capacity and experience.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Mills and Motherhood.

IT may be remembered that a committee of the Blackburn branch of the Christian Social Union was formed some little time since to investigate the influence that the employment of married women in mills has on infant mortality. Two medical men, Dr. M. Bannister and Dr. P. Prebble, and several ladies, including the matron of the infirmary and the matron of the District Nurses' Home, served on the committee. The report of the committee has now been issued. The prohibition of the employing of women in mills, even if desirable, the committee considers impossible owing to economic obstacles and its restriction would be very difficult. To diminish the economic difficulties the committee suggests the establishment in mills of maternity funds from which payments might be made to women immediately before and after confinement. It does not seem to think that mill work necessarily unfits women for domestic life but that more attention should be given in the schools to teaching girls how to look after a house and children, and that girls over 18 years of age, too, should have opportunities of learning these things. It considers the high infant mortality due mainly to improper feeding and not to the mothers working in the mills. All the attention recently paid to the subject has, of course, led to a good deal of newspaper correspondence and in contrast to the somewhat lenient view of the committee on the effects of mill life on married women the picture drawn by a mill-worker of over 30 years puts the case in a more unfavourable light. The woman worker hurries to the mill, where she sits or stands—as the case may be—before her frame for the whole of the working hours. "Her meals for the most part consist of tea and bread-and-butter, with possibly at dinner time a few 'chips' from the nearest shop." In the early morning there is the worry of getting the youngest child out of bed to be carried, wrapped in a shawl, to a neighbour's house. Then in the half hour allowed for breakfast the children have to be got ready for school after a hurried meal of tea and a "butty," and the mother has to rush off to the mill, often "eating her remnant of breakfast as she goes." The consequences of this course of life are that the mother and children are ailing and often under medical supervision. The faces of the women soon acquire a worn look, their lives are "one constant round of petty, nagging cares," they "grow pale and haggard-looking before their time," and clearly they are not those whose healthy vigour fits them to be the mothers of a stalwart race. Anyone who knows the Lancashire mill-hands will know that this picture is not over-coloured. It would be absurd to expect a vigorous race under the conditions of town and factory life at present obtaining. Something may, perhaps, be done to dispel the almost incredible ignorance of how to live which prevails among the mill-hands. So far the compulsory attendance of the children at the elementary schools has done next to nothing to give them practical help in leading healthy lives. Ladies' health societies and such like agencies are good but they cannot overtake the work. It seems, however, as if we were becoming more aware of the deficiencies of our elementary education and therefore the future may be looked to with some hope of improvement. In the new code just issued more attention is paid than of old to the physical education of the child.

Proposed Extension of the Water-supply.

The Manchester water committee proposes not only to lay a third pipe from Thirlmere but to extend in some degree the reservoir works at Longdendale which before Thirlmere was drawn upon were the main source of supply for Manchester. The construction of these works began in 1848 and the water was first delivered to the city in 1851. There are now five reservoirs in the main valley and two have been constructed on the Arnfield and Hollingworth brooks and there are reservoirs at Audenshaw where, however, there is a loss of storage through colliery workings. Exclusive of compensation water the average quantity obtained per day from Longdendale in the four years 1887-1890, four years with less than the average rainfall, was 20,434,865 gallons, but Mr. Hill, the engineer, does not think that Longdendale can in dry seasons be safely reckoned on to supply more than 20,000,000 gallons. This, with the Thirlmere supply from two pipes of 20,000,000, will probably meet the requirements for four or five years. In 1905 the total daily consumption of water was at the rate of 36,219,578 gallons and Mr. Hill says that no substantial increase in the supply can be obtained from any source but Thirlmere and he thinks that the third pipe should be ready by about 1910.

Ophthalmia at the Salford Union Hospital.

It was proposed at a meeting of the guardians on June 29th that an eye specialist should be engaged to treat the eyes of the children in the "eye sheds" at the hospital. The proposition was enforced by the statement that a boy whose case had been pronounced incurable was sent to the Royal Eye Hospital from the sheds and within a month he was cured; also that there were many cases of ophthalmia that had been in the sheds two years. It seems that the ophthalmia cases had been reduced from 60 to 18, and as one of the guardians stated, "except for new cases they could wipe them out altogether." He estimated the cost of a specialist at nearly £200 a year, but the mover of the proposition said that the medical officers at the hospital had each 400 patients in their care and that the cost of a specialist would be only £50 a year. Although a strong case was made out for this special help the motion was defeated.

Charitable Bequests.

The late Mr. James Holden of Rochdale left estate of over £120,000 for charitable purposes, and the trustees have made the following grants. The Manchester Royal Infirmary is to

receive £5000, the Northern Hospital for Women and Children £2000, Blackpool Victoria Hospital £1000, and Lytham Cottage Hospital £1000.

July 3rd.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Water supply of Swansea.

THE Swansea waterworks in the Cray Valley, Brecknockshire, are now completed. The reservoir has a storage capacity of 1,000,000,000 gallons. The waterworks were begun in 1894 under contract, but owing to disputes and litigation the corporation bought out the contractors at a cost of £26,000 and finished the work itself. The expenditure on the undertaking, including land, has exceeded £500,000.

Honorary Dental Surgeons and the Carmarthen Education Committee.

At the last monthly meeting of the Carmarthen borough education committee it was unanimously resolved to invite local dental surgeons to act as honorary dentists to the education authority, with a view to the making of periodical inspections of the teeth of children attending the elementary schools and to the giving of occasional instruction to the children and their parents on the preservation of their teeth.

Hereford City and County Asylum.

One of the most striking features in the thirty-fourth annual report of the committee of visitors of the Hereford county and city asylum is the statement that there is no special accommodation for isolating cases of infectious disease. It seems inconceivable that those who are responsible for the management of an institution which during 1905 had a daily average of 536 patients under treatment should have neglected to make adequate provision for this class of case. This neglect can hardly be said to be due to ignorance, for the medical superintendent (Mr. C. S. Morrison) and the Commissioners in Lunacy have again and again pointed out the need for such accommodation. In commenting upon an outbreak of measles, which lasted from February till May of last year and in which 34 patients and attendants were attacked, the Commissioners point out that it would probably not have attained such proportions had it been possible to secure the prompt isolation of the earliest cases. In his contribution to the report the medical superintendent comments upon the large number of patients who are admitted above the age of 30 or 35 years and in whom there is distinct evidence of cardio-vascular disease. Though there may be some difference of opinion as to whether the disproportionate number of persons who become prematurely senile is to be attributed to hereditary causes or to improper feeding when young, Mr. Morrison considers it is certain that alcohol is a large contributory factor. The Herefordshire labourer will have his full ration of beer or of cider even if his supply of meat is curtailed. It is, however, striking that while Herefordshire has the largest ratio to population of pauperism and confirmed insanity among the English and Welsh counties, yet from the standpoint of police returns it is an exceptionally sober county.

Brentry Inebriates' Home.

When the home for inebriates was established at Brentry, near Bristol, it was the intention of the founders that it should be a curative rather than a penal institution. The class of persons sent there in the early years of its existence were those whose only offence was drunkenness and who, if allowed their full liberty, were unable to withstand the temptation to drink. Lately, however, habitual criminals have been sent to the home until it has been possible for a member of the managing committee to report to the Gloucestershire standing joint committee that there are now in the institution as fine specimens of the criminal class as are to be found outside the walls of a criminal prison. The result of bringing together this class of person in a prison which is not really a prison must have been foreseen, so that it is not surprising to find that on a certain Sunday in June a serious outbreak occurred, when three of the attendants were maltreated and property was damaged. Assistance was fortunately obtained from Gloucester and from Bristol and the ringleaders have since been sentenced to various terms of hard labour. After this experience it is to be hoped that the managers, or those who are directly responsible for sending persons to the home, will endeavour to carry out more accurately the very laudable intentions of the founders of the institution.

The Incorporated Society of Medical Officers of Health.

The annual provincial meeting of the Incorporated Society of Medical Officers of Health will be held on Saturday, July 14th, at Bath, when Mr. C. S. Loch, the secretary of the Charity Organisation Society, will open a discussion upon the Relation of Sanitary Authorities to Charitable Organisations. In the evening there will be a public dinner and a reception in the Roman Baths by the President and members of the West of England and South Wales branch of the society.

The Adulteration of Butter.

By instruction of the Board of Agriculture the proprietor of the Bridgwater Creamery Company has been prosecuted before the Bristol magistrates for selling margarine to which a false description was applied. Evidence showed that by an ingenious system "nutrine" or "lardine" was worked up with butter and on an order being sent from a Bristol grocer for butter an article was received which on analysis was shown to contain 20 per cent. of this ingredient. The invoice bore the statement, "guaranteed pure and unadulterated within the meaning of the Food and Drugs Act." It was stated that the profits realised appeared very great. The bench of magistrates characterised the case as probably the worst that had ever been heard before them and on the application of the counsel for the Board of Agriculture they inflicted the heaviest penalty in their power—viz., £20 fine in each of the two cases for which the defendant was prosecuted and 50 guineas costs.

July 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Results of the Scottish Medical Preliminary Examinations.

THE Joint Board of Examiners of the Scottish Universities has issued the statistics of the preliminary examination at the entrance to the medical curriculum. At the University of St. Andrews six candidates entered for the four requisite subjects; one failed in all the subjects and two passed in all the subjects; at Glasgow 47 entered, seven failed in all, and 17 passed in all the subjects; at Aberdeen 16 entered, two failed in all, and four passed in all; and at Edinburgh 76 entered, ten failed in all the subjects and 28 passed in all the subjects.

Professor McKendrick's Valedictory Address.

Professor J. G. McKendrick, who is retiring from the chair of physiology in the University of Glasgow, delivered his valedictory address to the students last week at the close of the summer session. In the course of his address Professor McKendrick dealt with the progress of the science of physiology during the last 30 years, which he defined as the application of the methods of histology, chemistry, and physical science generally to the elucidation of the phenomena of life. So far as histology was concerned immense progress had been made. The microscope had been so improved that of physical instruments it was perhaps the one which most nearly approached perfection. The methods of histological research had also become more thorough and scientific and it was doubtful if much more progress in the direction of histology could be made. As to the experimental methods, those that were possible with living tissues from recently killed animals had been well worked out. The phenomena of animal electricity had been investigated with remarkable success. Until recently there seemed little hope of further progress, but within the last few years the phenomena of ionisation appeared to offer a new field for investigation. In dealing with the question of vivisection, Professor McKendrick, who disclaimed desire to discuss the subject controversially, said that he found it difficult to imagine how those who denied its use altogether in physiological science could fail to see what remarkable progress had been made in our knowledge of the digestive processes by such methods. While saying this he urged

that it was not necessary to repeat the experiments of previous observers except possibly at the beginning of a new line of research. As regards the education of students of medicine, Professor McKendrick was of opinion that too much time and energy had been expended on difficult experimental work, on the physiology of nerve and muscle, and on relatively unimportant matters in electro-physiology. In the future the experimental course should be much broadened, so as to include simple experiments on the hydraulics of the circulation, on respiration, on the physical properties of the blood, on the phenomena of the senses, and on processes of digestion. During the past 30 years the two departments of physiological science in which there had been, in his judgment, the most marked progress were the knowledge of the nerve paths to the central nervous system and the subject of internal secretions. As regards the future there was no doubt that it was in the direction of physiological chemistry that they would have to look for the greatest progress during the next few decades. At the conclusion of his address Professor McKendrick bade farewell to his students.

Glasgow Post-office.

Great interest is being taken by the members of the medical profession in Glasgow in the appointment of medical officers to the Post-office. It has been arranged that the appointment is not now to go to one man and the city has been divided into six districts, to each of which one medical man will be appointed. Each of the medical men appointed must be between 30 and 60 years of age, must reside in his district, and will be allowed to carry on private practice. It is proposed to fix an age-limit for the tenure of the appointment but this has still to be determined.

Inspection of Meat in Glasgow.

At a meeting of the Glasgow corporation health committee's subcommittee on the inspection of meat and fish there was considered a request by the Glasgow United Fleshers' Society to be allowed to receive the best parts of unmarketable carcasses in order that they might be sterilised in premises to be provided for the purpose and thereafter sold for consumption as human food, as is done on the continent. At the same meeting, in dealing with the question of the importation of boneless meat and offal and the possibility of provision being made for the proper inspection of such commodities, the subcommittee recommended that representations should be made to the Government to take steps for seeing that such meat is properly inspected at the places of slaughter or otherwise to have an embargo placed upon its importation.

Scottish Dentists.

The members of the Scottish branch of the British Dental Association held their annual meeting at Moffat on June 22nd, and on the 23rd the party had an excursion to St. Mary's Loch. On the 22nd, following the business part of the proceedings, a dinner was held in the Buccleuch Arms Hotel, at which there was a company of about 30. The President of the branch, Mr. D. Cumming, L.D.S., of Falkirk, presided, and among the guests present was Provost Knight of Moffat.

University of Aberdeen Anatomical and Anthropological Society.

At a meeting on June 30th, Professor R. W. Reid presiding, anatomical variations were described by Mr. G. S. Melvin and the President. The treasurer's report was read and the following office-bearers for the coming year were elected:—President: Professor R. W. Reid. Vice-Presidents: Dr. Alexander Low, Dr. W. A. H. M'Kerrow, and Mr. James Watt, M.A. Secretary: Mr. A. G. Stewart, M.A. Recording secretary: Mr. J. D. Fiddes, M.A. Treasurer: Mr. G. S. Melvin.

Extension of Marischal College.

The adamant pavement in front of the new buildings at Marischal College having now been laid the wooden hoarding—which was erected when operations in connexion with the building of the front block were commenced—has been removed. It is expected that a start will be made soon with the laying of the wooden paving in Broad-street, between Queen-street and Upper Kirkgate.

The Cost of Maintenance at Kingseat Asylum.

A meeting of the asylum committee of the Aberdeen city district lunacy board was held on June 26th, Mr. William Giles presiding in the absence of Mr. James Cheyne, the convener. From a statement submitted of the expenditure on the maintenance of the asylum for the year ending May 15th last it was shown that there was a balance to the credit of the maintenance account of £675 9*s.* 5*d.*, and a balance to the credit of the providing account of £282 3*s.* 5*d.* The maintenance cost of patients per head per annum was £25 2*s.* The estimated number of patients for the year ending May 15th, 1907, is 428 and the estimated maintenance account for the year is £10,700, being at the rate of £25 per patient per annum. The amount to be raised by assessment this year will be £1011 less than the amount assessed for last year, this being equal to about three-eighths of a penny per £ less than last year's rate of assessment.

The summer graduation ceremony at Aberdeen has been provisionally fixed for Wednesday, July 25th.

July 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Consumption in Ireland.

THE Local Government Board of Ireland has issued to the clerk of each urban and rural council in Ireland a circular on the above subject giving useful instructions for dealing with this important disease. It points out that the death-rate for the years 1902, 1903, and 1904 shows an upward tendency in Ireland, the figures being as follows:—

Year.	Total number of deaths from all forms of tuberculosis.	Number of deaths from pulmonary tuberculosis (consumption).
1902	11,837	9400
1903	12,180	9659
1904	12,691	9833

In 1904 (the latest available returns) the figures 9833 represent a death-rate of 2·9 per 1000, which rate has only been reached on four previous occasions. In England the death-rate from tuberculosis has gradually fallen, until in 1904 it has reached 1·23, or less than one-half of the death-rate in Ireland. It is, perhaps, a pity that this circular of the Irish Local Government Board did not follow the lead of the one issued by the Scotch Local Government Board and regard consumption as an infectious disease, to be dealt with by such measures as are applicable to infectious diseases; but it is, at any rate, satisfactory to see that official effort is being made to stem what is rapidly becoming a national calamity. Mr. R. A. Brown, secretary of the Ulster branch of the National Association for the Prevention of Consumption in Ireland, has sent to each Irish Member of Parliament a copy of a pamphlet pointing out the deplorable position which Ireland occupies in reference to consumption, seeing that in their country nearly 13,000 deaths annually are due to the malady. Mr. Bryce, the Chief Secretary for Ireland, has promised that his department will do its best.

School of Physic, Trinity College.

Sir John Banks, K.C.B., physician-in-ordinary to the King in Ireland, Regius professor of physic, Trinity College, Dublin, has recently endowed a medal, to be called "The Banks medal," and a money prize, to be awarded to the two foremost candidates at the examination held every second year for the medical travelling prize in Trinity College, Dublin.

Honour for Sir Christopher Nixon.

Sir Christopher John Nixon, who was knighted in 1895 and has now been raised to the dignity of a baronet, is a son of Mr. C. W. Nixon of Dublin and was born in that city in 1849. He took the diploma of L.R.C.S. Irel. in 1868, was elected a Fellow of the College of Physicians of Ireland in 1876, graduated as M.B. at the University of Dublin in 1878, and in 1885 received the degree of M.D. from the Royal University of Ireland. In 1872 he married Mary Anna, daughter of Mr. Dominick Blake of Galway. Sir Christopher Nixon's position as a leading member

of the medical profession in Dublin naturally implies the holding of distinguished appointments. He is an ex-President of the Royal College of Physicians of Ireland and is a member of the General Medical Council, in which he has represented the Royal University of Ireland since 1897. He is professor of medicine at the Catholic University and senior physician to the Mater Misericordiæ Hospital, Dublin. He was the first President of the Royal Veterinary College of Ireland, an institution in the founding of which he took an active interest. He is the author of a "Handbook of Hospital Practice and Physical Diagnosis," published in 1888, and of various papers and memoirs on professional subjects.

Apothecaries' Hall of Ireland.

On June 29th in the examination room of the Apothecaries' Hall, Mary-street, Dublin, the freedom of the Worshipful Company of Apothecaries was conferred on Sir Christopher J. Nixon, Bart., and on Dr. Denis Joseph Coffey, lecturer on physiology, histology, and elementary biology in the Catholic University Medical School, Cecilia-street, Dublin, and examiner in physiology of the Royal University of Ireland. Mr. G. R. S. Stritch, the deputy governor of the Company, in introducing Sir Christopher Nixon, said that the baronetcy just conferred on him was an honour pleasing to its recipient and delightful not only to the medical profession in Ireland but to the large circle of his patients. The magnitude of the honour could only be properly appreciated when it was considered that among the thousands of men whose names appeared on the Medical Register there were at present only 14 baronets. It was well merited not only on account of Sir Christopher Nixon's conspicuous professional attainments but also for his unfailing courteousness, affability, and kindness of heart. In introducing Dr. Coffey, Mr. Stritch said that his integrity of character and purity of purpose had caused him to be singled out from amongst many others as a gentleman worthy of filling the responsible position of a member of the Royal Commission recently appointed in connexion with the University of Dublin.

Royal College of Surgeons in Ireland.

The preliminary announcement relative to the Barker anatomical prize to be awarded in 1907 states that this prize of £21 is open to any student whose name is on the anatomical class list of any school in the United Kingdom. The preparations entered must be placed in charge of the curator of the Royal College of Surgeons in Ireland on or before April 30th, 1907. The prize is offered for a dissection showing the viscera in relation with the abdominal surface of the diaphragm. The relations of the common bile-duct, which should be seen opened up along its entire length, are to be fully retained. The preparation must be marked with a fictitious signature and accompanied by a sealed envelope bearing outside the same signature and containing inside it the name of the competitor.

Scheme of Sewerage and Water-supply for Newtownards.

The Newtownards urban district council on June 26th had the preamble of its Bill for a proper scheme of sewerage and water-supply approved by the Police and Sanitary Committee of the House of Commons. Newtownards is a prosperous Ulster town about eight miles from Belfast, situated at the northern extremity of Strangford Lough, and it has neither a proper sewerage works nor a water-supply, so that it is hoped that these defects will now be remedied.

Queen's College, Belfast.

On June 30th Sir Donald Currie visited Queen's College, Belfast, where he was presented with addresses from the president and council and from the students in recognition of his munificent gift of £20,000 to the better equipment fund of the College. In responding he made an interesting speech, in the course of which he offered to give one-fourth of the £5000 required for the provision of suitable athletic grounds if the students would raise the remainder in a year, a challenge which was promptly accepted. It is contemplated to raise the money by means of a bazaar.

The Medical Officer of Health of Belfast.

At a meeting of the city council of Belfast held on July 2nd the members confirmed the resolution passed previously by the council in committee that the salary of the new medical officer of health should be £600. The Lord Mayor pointed out that it would be well to wait until the Local Government Board had given its opinion on the matter as he did not expect that it would confirm the resolution. He appears to have good grounds for his opinion. The view of the reform party in Belfast is that the Local Government Board should insist on a larger salary being paid, and should demand that candidates for the office should have had special training in public health otherwise Belfast will be placed in a ridiculous position. The citizens are at present in this unfortunate plight that they must look to the Local Government Board to protect them against their own corporation which is apparently blind to the seriousness of the situation. A city of 360,000 inhabitants requires as its chief medical adviser a man of the very highest attainments, qualifications, and special experience, while a salary of £600 may limit the number of candidates in such a way that no one having the necessary attributes may apply. It is rumoured that some of the corporation who believe that £600 are enough have a candidate of their own for the post. The death-rate of Belfast from all causes for the four weeks ending June 16th was 20·8 per 1000, while in the corresponding four weeks of last year the death-rate was 18·5 per 1000. Facts like these appeal to the popular imagination and it is not surprising that they do so.

July 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Serum Treatment of Tuberculosis.

AT a meeting of the Academy of Sciences held on June 25th M. Lannelongue read a paper giving an account of some investigations which he had made in association with Dr. Achard and Dr. Gaillard on the serum treatment of tuberculosis. Questions relative to vaccination methods and the use of antitoxins have been proposed and followed up for some time with the greatest activity. For the last seven years the experimenters have been trying on guinea-pigs a toxin extracted from the bacillus occurring in the human subject. Guinea-pigs reacted to tuberculous infection almost like human beings and they were very receptive for the human bacillus. Pulmonary tuberculosis was artificially produced in them and they were afterwards submitted to therapeutic processes; all the results of observation led to the belief that if guinea-pigs recovered after suffering from pulmonary tuberculosis human beings might recover also. Professor Lannelongue described two experiments in which a large number of animals were used. In the first experiment four groups of equal weight, each consisting of 30 guinea-pigs, were inoculated in the lungs with the same dose of a virulent culture. The first group was taken as a control; the second was treated with the serum of normal asses' blood; the third was treated with the serum of asses' blood, presumed to be antituberculous; and the fourth was treated with a prophylactic injection of this latter serum previously to the tuberculous inoculation. The final result was that 372 days after the inoculations the mortality in the various groups was 90 per cent. for the control group, 87 per cent. for the group injected with normal serum, 40 per cent. for the group injected with antituberculous serum, and 64 per cent. for the group injected prophylactically. In the second experiment the investigators endeavoured to immunise a horse and used its serum. The guinea-pigs were divided into two groups of 50 each, one of these being taken as the control and the other being treated with the serum. Both groups were inoculated in the lungs on the same day. After 16½ months the mortality was 78 per cent. in the control group and only 42 per cent. in the group treated with serum; while after 20½ months the mortality was 96 per cent. in the control group and 60 per cent. in the group treated with serum. Necropsies of all the animals were made; they showed that generalised pulmonary lesions predominated in the control animals, whereas the lesions in those which had been injected with serum were either circumscribed or very little advanced. Among the last-mentioned animals, some had lesions hardly visible to the naked eye, some showed cicatrices of recovery, and others did not show any lesion at all. M. Lannelongue and those who worked with him thought that the time had come for the systematic treatment of patients with the serum of asses' blood, preferably with that of immunised animals; some

observations which have been already made on patients showed that the treatment was well tolerated and did not cause any rise of temperature.

Sudden Congestion or Acute Hæmatoma of the Uvula.

At a meeting of the Academy of Medicine held on June 12th M. Fabre (of Commentry) said that the uvula was sometimes the seat of a sudden congestion or local apoplexy which caused a tickling sensation as if a foreign body were in the back of the throat; this was soon followed in the first place by an urgent desire to swallow or cough up the cause of the annoyance and in the second place by violent coughing, retching, or vomiting. These symptoms were caused by a hæmatoma of the uvula, presenting a globular form like a cherry attached to the velum palati. M. Fabre has observed this condition five times altogether—three times in men and twice in women. In two cases there was no apparent cause for it and in one it was due to scratching of the part by a hastily swallowed crust of bread. The treatment consisted in puncture of the swelling, followed by astringent gargles made with alum, tannin, or rhatany.

An Indigenous Case of Madura Foot.

At a meeting of the Academy of Medicine held on June 19th M. Reynier reported the occurrence of a case of Madura foot in a man who had never been out of France. He said that this was the first case of the kind in France and the second in Europe. Madura foot was a disease of hot countries where the inhabitants walked barefoot. The lesion (mycetoma) consisted of a swelling due to the presence of parasites and containing granular particles of various colours, principally white. The patient under the care of M. Reynier was a man, 51 years of age, an indoor servant, who had never been out of Paris. In the year 1892 he noticed on his foot a blister which discharged a little serous fluid. M. Danlos saw the case and considered it to be syphilitic. Rather more than a year afterwards the place became painful. In 1893, when the man was admitted as a hospital patient under the care of M. Reynier, there was a large blister with numerous fistulæ, but the articulations of the foot were unaffected. The lesion was suggestive of actinomycosis, but treatment gave no result and M. Reynier amputated in the lower third of the leg. The bones were quite sound, whereas in actinomycosis they were usually affected. In the sclerosed tissue there were nodules containing each a granule surrounded with pus. The granules were rolled up like the excrement of earthworms and consisted of a felted cord of mycelial tubes with an enlarged extremity.

Surgical Treatment of Lupus of the Face.

At a meeting of the French Society of Dermatology and Syphilography held on June 7th M. Morestin showed two patients in whom lupus of the face had been treated by excision and subsequent autoplasty. In one of the cases the disease extended over the greater portion of the left cheek and the wound was filled by a flap taken from the suprahyoid and subhyoid region. This flap united perfectly but after some time a doubtful spot appeared on its edge; this was removed under cocaine and the result has been good up to now. In the second case the disease was less extensive and was situated on the right cheek; the effect of the operation as regards appearance was satisfactory.

Treatment of Late Diphtheritic Paralysis by Injections of Antitoxic Serum.

At a meeting of the Société Médicale des Hôpitaux held on June 13th M. Comby described the case of a girl, aged four years, who suffered from diphtheritic paralysis of all four limbs and of the pharynx, coming on about a month after recovery from an attack of diphtheria in the throat. After four injections of antitoxic serum repeated at intervals of three days she made a complete and very quick recovery. M. Barbier said that it was not uncommon for patients, especially adults, some days or weeks after an attack of diphtheria affecting the throat to die suddenly or after a short illness from bulbar paralysis. The patients most liable to suffer in this way were either those whose treatment was undertaken too late or was otherwise unsatisfactory or those who were attacked with the severe pseudo-membranous form of diphtheria. The symptoms which preceded bulbar paralysis were mental depression, anxiety, prostration, and tachycardia. The only treatment consisted in the immediate giving of a new series of injections of antitoxic serum.

Iodide of Potassium in the Treatment of Dry Pleurisy.

M. Jacquet and M. Luzoir have observed three remarkable instances of the resolving action of iodide of potassium in dry pleurisy. In one of these cases the friction sounds were of a quite remarkable intensity and perceptible at a considerable distance from the thorax, but these sounds disappeared in a few days under the influence of iodide of potassium solely. In the patient who was shown the inflammation was of exactly three weeks' duration, and there were intense friction sounds extending over a great part of the right pleura. The iodide was administered on May 26th in a dose of one gramme and on the 28th the improvement already referred to was evident. From May 28th to June 2nd three grammes were taken and there was a decline of the friction sounds day by day, terminating on June 3rd in a total disappearance of them which has been maintained ever since. This mode of treatment was not entirely new, but striking instances of this kind were so little known that the cases deserved attention. M. Jacquet and M. Luzoir communicated their paper at a meeting of the Société Médicale des Hôpitaux held on June 22nd.

Vaccination at Tongking.

Near Hanoi there is an institution for the production of vaccine lymph. It was founded in 1904 and the results which it yielded during 1905 were extremely satisfactory. The output of vaccine lymph rose to 632,785 portions (*doses*), of which 480,929 portions were used in Tongking, Annam, and the neighbouring countries. The magnitude of the production has not interfered with the quality of the lymph, for 95 per cent. of the vaccinations were successful. The principal part of this lymph was supplied to medical men who were public vaccinators. At the commencement of 1905 this institute supplied only the public vaccinators in Tongking, but its field of action has by degrees become larger and the public vaccinators of Annam are beginning to use its products concurrently with those of the institute at Saigon. The natives are not showing any antipathy to vaccination; owing to the success which has been obtained they recognise its good effects in connexion with small-pox and they do not hesitate to bring their children to the public vaccinators.

July 3rd.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Maternity Hospitals for the Provinces.

THE Turkish newspaper *Ikdam*, which is published in Stamboul, has announced that the Ottoman Government has decided to establish maternity hospitals in the chief provincial towns. Some will, it is supposed, be located in the pavilions of the female section of the already existing infirmaries in these towns, while some will be constructed *de novo*. These establishments will have modest proportions to begin with, but it is intended to increase and to develop them little by little and thus to meet in future all the necessary requirements of such institutions. All the women *en couche*, especially those of the poorer classes, will receive there careful treatment at the hands of medical men and qualified midwives. Should this decision of the Ottoman Government take a definite practical issue it will prove to be a great boon to females in the provinces, for in provincial Turkey pregnant women are exposed to many dangers owing to the practices indulged in by a formidable host of unqualified, unscrupulous, extremely ignorant and superstitious *sages femmes*. These latter hold almost an unlimited sway in the provinces and indeed in the suburban districts of the capital itself. I have under my treatment a great number of suffering women of the poorer classes of different nationalities. Many among them are afflicted with different kinds of uterine trouble directly traceable to the mismanagement and ignorance of these unqualified midwives, whose notions of the most primitive rules of cleanliness and disinfection are very scanty indeed. Of late the Ottoman Government has tried to restrict the mischief by prohibiting the non-licensed women from engaging in midwifery practice but the attempts have proved futile. The unqualified *sages-femmes* still abound, thriving on the utter ignorance of the population. In Turkey generally women in labour or with uterine trouble

still shrink from calling males to their assistance; they still prefer to be treated by one of their own sex, no matter how destitute of the requisite amount of knowledge. In Constantinople itself there exists only one maternity hospital; it has been doing good work for about ten years, although statistics of its actual performances are unavailable. One maternity hospital is, however, absolutely insufficient for such a great city as Constantinople.

Regulations concerning Pharmaceutical Preparations.

All the pharmaceutical preparations made in Turkey will be henceforward subjected to an examination by the Medical Council. Only after this examination will they be offered for sale. They will have a label attached with an inscription "autorisé par le conseil médical." Those submitting the preparations to an examination will have to pay a small tax.

A School for the Blind and Deaf and Dumb.

It has been decided to create in Constantinople a school for the blind and deaf and dumb. It is said that a tax of 1 per cent. will be exacted from the salaries of State functionaries for the benefit of the school. As the Moslems are, speaking generally, of a charitable disposition and consider it part and parcel of their religious duties to help the suffering of their community, these functionaries will quite willingly pay their share. There is a difficulty, however, and it lies in the fact that the officials themselves are very frequently irregularly paid by the Government. The arrangement, therefore, is on a doubtful basis and it will not be wise to be too sanguine.

June 25th.

Obituary.

JOHN HENRY BRIDGES, M.B. OXON., F.R.C.P. LOND.

Dr. John Henry Bridges, who died at Tunbridge Wells on June 15th, was for many years actively engaged in the general supervision of Poor-law institutions in London and was consequently well known to all the medical men concerned in that particular branch of practice. He was the son of the Rev. Charles Bridges and was born at Old Newton, in Suffolk, in October, 1832. His school education was received at Rugby under the Rev. Dr. Tait, after which he proceeded to Oxford entering first at Wadham College and becoming a Fellow of Oriel College in 1855. Deciding to enter the medical profession he studied at St. George's Hospital and graduated as M.B. at the University of Oxford in 1859 From 1861 to 1869 he was physician to the Bradford Infirmary and in 1869 married Miss Mary Alice Hadwen of Halifax. In 1867 he was elected a Fellow of the Royal College of Physicians of London and in October, 1892, he delivered the Harveian oration on Harvey and his Successors. In 1869 he accepted an appointment as one of the inspectors under what was then the Poor-law Board but which has since been renamed the Local Government Board. These gentlemen are officially designated as either general or medical inspectors. Dr. Bridges to some extent combined both functions; he did not engage in purely medical inquiries such as the causation of disease or the circumstances leading up to localised outbreaks of illness, but he was occupied almost entirely in supervising the administration, medical and general, of the workhouses, the Poor-law infirmaries, and the various institutions belonging to the Metropolitan Asylums Board. In such a position it will be easily understood that he had to balance the claims of many conflicting interests and for such work he was well qualified by his calm, dispassionate judgment, kindly disposition, and general knowledge of the world.

His election to a Fellowship at Oriel College was a sufficient indication of his literary and philosophical attainments. He was, in fact, known to the reading public as the translator of several works of Auguste Comte, the founder of Positivism, rather than as a medical man. He, however, did excellent work in what has been termed that great silent conspiracy, the Civil Service, upon the members of which there has been imposed the seal of an official reticence. There is, indeed, a certain similarity between the career of Dr. Bridges and that of the late Matthew Arnold. Both held important posts as Government inspectors and both were more widely known in connexion with their literary output than with their official duties—a fact which is doubtless in some measure to be explained by the circumstance that in this latter capacity each was true to the traditions of the service to which he belonged. Dr. Bridges was for some 20 years the medical inspector for Poor-law purposes in the metropolis, and having regard to the enormous population served by the various institutions above enumerated and to the importance which the Local Government Board doubtless attached to the reports of Dr. Bridges, the office must be regarded as involving a very high degree of responsibility in the matter of Poor-law and isolation hospital administration. Among those with whom Dr. Bridges was brought into official contact he was regarded with the greatest respect and with feelings akin to affection. He was ever on the side of progress and his influence can be traced in many of the reforms passed during his official career. When at the age of 65 years Dr. Bridges passed, like all other civil servants, into official retirement he was presented by the medical superintendents of the institutions with which he had been associated with a touching tribute in the shape of a valuable testimonial of the respect in which he and his work were held. But although this was the termination of his official career his valuable services were not long lost to the Metropolitan Asylums Board, as he was shortly afterwards nominated as one of the managers of that body, and for some years afterwards he took the deepest interest in the administration of the Board, proving himself eminently helpful and sympathetic in all which concerned the interests of the medical superintendents and the improvement of the nursing arrangements.

CHARLES HENRY TAYLOR, M.B.LOND., L.R.C.P. LOND., M.R.C.S. ENG., L.S.A.,

SENIOR SURGEON TO THE DERBYSHIRE ROYAL INFIRMARY.

Charles Henry Taylor was the eldest son of the late Alderman Taylor of The Cedars, Newport Pagnell, where he was born on Jan. 3rd, 1860. He died suddenly and unexpectedly on June 15th at Derby where he was senior surgeon to the Derbyshire Royal Infirmary. He was educated at the Crescent School, Margate, and at King's College School, where he boarded with Dr. Twentyman (at Twickenham). From there he matriculated at the University of London and entered with a large number of other students at King's College about the time when Sir Joseph Lister joined it as professor of surgery. For the next five years he lived with Mr. C. B. Keetley. A member of the staff of King's College writes: "Thoroughness and persistence were the characters of his work, which, despite his want of opportunity of holding a resident appointment at his old school, resulted in high essential success. Among his fellow students his quiet and cheerful manner gained him a general popularity and there are many old friends who will recall his kind help to them in those days." He had other qualities also which endeared him to his friends and acquaintances. He was absolutely trustworthy and led a life quite free from vice or any other mean feature, while he was an admirable musician with a sound and extensive knowledge of music, a skilled performer on the piano and on the organ, and a singer with good taste and an agreeable high baritone voice. He was naturally therefore very sociable and his society was much sought. He enjoyed heartily a good play, a good book, a good joke, or a good story, and was always ready to help to promote any object which any intimate friend had at heart, and to interest himself in it. Although he had no spontaneous affection for athletic exercises or sport, at Derby he took a keen interest in the town football team—a celebrated and successful one—and was a member of its controlling committee. While at King's College he dressed for Sir Joseph Lister in three summers (1880, 1881, 1883), and for Professor John Wood in two winters (1881-82, 1882-83), which illustrates his keenness for practical work. In 1885 he took the degree of M.B. at the University of London and soon afterwards became house surgeon to the West London Hospital and then house physician. He was asked to stay beyond the usual time. His punctuality, tact, and good sense, combined with his musical talents and good nature, made him an ideal hospital resident.

In 1889 he went to Derby as senior house surgeon to the Royal Infirmary and held the post for seven years. From then until his death he threw himself with enthusiasm into the work of the institution, especially in connexion with the

various building operations which have made it a model hospital, and with musical matters. He acted as organist to the infirmary chapel. In 1896 he joined Mr. John A. Sharp in practice and when that gentleman resigned his office of surgeon to the infirmary Dr. Taylor was elected to the visiting staff, in five years becoming senior surgeon. He did a great deal of good work but in private surgical practice found himself handicapped by the accessibility of such great surgical centres as London, Leeds, and Manchester. He was fearless in the execution of his duty. During the building operations at the infirmary already mentioned a high wall collapsed, crushing and seriously injuring several workmen. It was some time before one man could be extricated from the débris and Taylor saw to his injuries and dressed his wounds as he lay, all the time in imminent danger of being buried himself by an adjacent wall which was tottering to its fall. He had not been well for three months before his death, having suffered from several attacks of influenza. About the end of May he was being attended by Dr. R H. Luce and afterwards consulted Sir Hugh R. Beevor. The latter recommended him to give up practice for 12 months. He then went to Newport Pagnell for a time, returning to Derby on Friday, June 15th. Mr. Sharp, who was staying at his house, says that after lunch on this Friday Dr. Taylor "had a little nap. On rising he said that he felt horribly depressed and very miserable." This conversation took place in his room and at its close he said he would go into the surgery and look through the papers that had accumulated. This was about 3 P.M. Mr. Sharp then went out on a journey, returning about 5 o'clock. From what the maid then said he went upstairs and found Dr. Taylor lying on his bed no longer alive. A post-mortem examination was made by Dr. F. B. Thornton and Dr. Luce. The organs as a whole appeared to be perfectly healthy but the heart was in an exceedingly weak condition. The cause of death was syncope. Looking back, it seems very unfortunate that the deceased when feeling, as he said, "horribly depressed and very miserable," and suffering in all probability from catarrhal or influenzal poisoning of a weak heart, should have gone soon after a railway journey into his surgery to the worrying and fatiguing work of looking over accumulated papers and correspondence. Had he gone straight to bed, rest, warmth, and open windows might have enabled him to look over his papers safely on the next day. The catastrophe is a lesson to all of us.

Dr. Taylor was unmarried. One of his characteristic acts was to join with his uncle and sister in restoring, at the expense, it is said, of about £800, the fine organ of St. Peter and St. Paul's Church, Newport Pagnell. When the writer of this account last saw him Dr. Taylor announced with glee that he was going to take a holiday at Newport and to spend much of the time in playing on this organ, then just completed. He was buried in the town of his birth on June 19th, leaving many mourners both there and at Derby.

FORBES MANSON GRANTT TULLOCH, M.R.C.S. ENG., L.R.C.P. LOND.,

LIEUTENANT, ROYAL ARMY MEDICAL CORPS.

THOSE who knew the late Lieutenant Tulloch personally will feel that by his untimely death we have not only lost a charming personality but also a very promising worker in a difficult department of research and one who was strenuous and faithful in his work and duty. Many opportunities occurred at St. Mary's Hospital of watching the development of his inclinations towards work on the scientific side of medicine. He frequented the pathological laboratory before it was necessary for him to do so and practised himself in the ordinary diagnostic methods in use, and when he later became demonstrator of pathology it was obvious that his real bent lay rather in this direction than towards purely clinical work. He had clever fingers, so that his technique quickly surpassed the average and his microscopical manipulations reached a high level even at that time. After qualifying and obtaining admission to the Royal Army Medical Corps he studied for some time under Major W. B. Leishman and when he was sent to Uganda to work at sleeping sickness it was felt that his future success was assured. As it is, his completed work on that subject shows that his ability, enthusiasm, and patience would have borne fruit had he been spared. A paper written by him in collaboration with Lieutenant Gray on the Multiplication of the Trypanosoma Gambiense in the Alimentary Canal of Glossina Palpalis has been published in vol. vi., of the Reports of the Sleeping Sickness Commission; and another paper by him is in the hands of the Tropical Diseases Committee of the Royal Society and will soon be published. Shortly before his death he was quite cheerful and courageous, although he knew only too well that he was doomed. Such an attitude in one who was young and gifted has no little of the heroic in it.

WILLIAM BATES RAMSDEN, B.Sc., M.B., CH.B. VICT.

BY the untimely and sudden death of William Bates Ramsden on June 29th the University of Manchester has been deprived of the services of one who promised to enhance the reputation of the Manchester school by his researches in sanitary chemistry. He had prepared himself for a specially useful career by taking successfully complete courses in chemistry and in medicine. In 1897 he obtained a first class in the final B.Sc. examination in the Honours School of Chemistry and in 1903 he passed the examination for the degree of M.B., Ch.B. of the University of Manchester. For more than three years he had given considerable attention to the application of chemistry to hygiene and was appointed in 1904 Research Fellow in Sanitary Chemistry at the Public Health Laboratory. In 1905 he succeeded Mr. D. L. Chapman who for the previous three years had occupied with marked success the post of lecturer on sanitary chemistry. Dr. Ramsden had for the last year been specially engaged in researches on foods, preservatives, and adulterants. This work was already yielding results of great practical importance. A short account of his new methods of estimating formaldehyde appeared in the Memoirs and Proceedings of the Manchester Literary and Philosophical Society (Vol. XLIX., No. 16, 1905) and in the Archives of the Public Health Laboratory (Vol. I.). It is hoped that the notes which he has left of his larger work on the subject of formaldehyde in milk will be sufficiently complete to allow of its publication. Dr. Ramsden, who was in his thirtieth year, had just been speaking to two members of his class when he suddenly fell dead from failure of the heart. He was an inspiring and successful teacher and his death is deeply regretted by all his colleagues and pupils.

Medical News.

UNIVERSITY OF OXFORD.—At examinations held recently the following candidates were successful:—

FIRST M.B. EXAMINATION

Organic Chemistry.—P. L. Gibson, Trinity; W. F. Harvey, Balliol; T. B. Heaton, Christ Church; G. L. Inkster, Balliol; C. H. G. Martin, Magdalen; A. S. Roe, Balliol; and R. H. Udall, Queen's.

Materia Medica and Pharmacy.—T. B. Batchelor and J. L. Birley, University; F. W. Browne, Wadham; P. N. Cave, University; A. R. Chavasse, Hertford; N. G. Chavasse, Trinity; G. H. Cross, Balliol; A. W. Donaldson, Hertford; H. O. S. Gibson, New College; N. Glover, Trinity; T. B. Heaton, Christ Church; W. D. Kennedy, University; C. H. G. Martin, Magdalen; A. E. Mavrogordato and S. F. Moore, Trinity; W. J. Oliver, Oriel; E. L. Pearce-Gould, Christ Church; W. J. Pearson, University; E. P. Poulton, Balliol; A. S. Roe, Christ Church; H. W. Scott-Wilson, Queen's; O. L. V. Simpkinson, Corpus Christi; C. J. G. Taylor, University; D. B. Todd, Lincoln; W. W. Wagstaffe, New College; and R. O. Ward, Queen's.

Human Anatomy and Human Physiology.—C. N. Binney, Corpus Christi; H. J. B. Fry, Magdalen; H. E. Gibson, Queen's; A. E. Mavrogordato, Trinity; G. E. Nelligan, Exeter; H. P. Newsholme, Balliol; E. W. M. Phillips, Jesus; A. H. Savage, New College; O. L. V. Simpkinson, Corpus Christi; S. S. Strahan, Keble; and T. S. Wright, Brasenose.

SECOND M.B. EXAMINATION

Pathology.—G. R. H. Almond, Hertford; B. E. A. Batt, Trinity; G. D. H. Carpenter, non-collegiate; E. A. Cockayne, Balliol; M. Davidson, Trinity; C. G. Douglas, Magdalen; M. W. Flack, Keble; J. F. Hornsey, Wadham; F. Howson, non-collegiate; E. L. Kennaway, New College; and C. T. Raikes, Trinity.

Forensic Medicine and Public Health.—C. Beards, Jesus; E. L. Kennaway, New College; G. M. Johnson, Magdalen; A. S. MacNalty, non-collegiate; H. C. G. Semon, Magdalen; and H. S. Souttar, Queen's.

Medicine, Midwifery, and Surgery.—O. A. R. Berkeley-Hill, Trinity; D. Davidson, Brasenose; S. Nockolds and L. J. J. Orpen, Keble; and H. S. Souttar and A. G. Thompson, Queen's.

UNIVERSITY OF CAMBRIDGE.—At a Congregation on June 19th the following degrees were conferred:—

M.B. and B.C.—F. A. G. Jeans, St. John's; and R. P. Cockin Gonville and Caius.

During the academic year just closed 22 candidates received the degree of M.D., five the degree of Sc.D., three the degree of M.C., 62 the degree of M.B., and 67 the degree of B.C.—Mr. C. T. R. Wilson, F.R.S., lecturer at the Cavendish Laboratory, has been re-elected to a Fellowship at Sidney Sussex College, and the Rev. T. C. Fitzpatrick, assistant demonstrator, has been elected President of Queen's College.

UNIVERSITY OF LEEDS.—At a congregation of the University held on June 30th the degrees of Bachelor of Medicine and Bachelor of Surgery were conferred on the two following graduates in medicine and surgery of the Victoria University who had been students at Leeds:—

Oscar Bagster Trumper and Joshua Williamson.

At the First Examination for the degrees of M.B. and Ch.B. the following candidates were successful:—

Parts I. and II.—J. P. Brown, J. B. Fisher, H. V. Lamb, N. V. Mitton, B. A. Slowcombe, G. V. Stockdale, N. S. Twist, and R. Ward.
Part I.—R. D. Fairclough.
Part II.—H. N. Ingham, J. P. Musson, and F. W. Nunneley.

The council of the University, acting on the recommendation of the board of the Medical Faculty, has decided to create five new lectureships in connexion with the institution of the school of dentistry. These are lectureships on (1) dental surgery; (2) operative dental surgery; (3) dental anatomy and physiology (including dental microscopy); (4) dental mechanics (including practical dental mechanics); and (5) dental metallurgy (including practical dental metallurgy). During the current week the written examination of the second and final M.B., Ch.B. examinations will be completed. The *viva voce* and practical parts of the second examination will also be conducted during the week. In the course of next week the clinical examinations and the other parts of the final examinations will be concluded.

TRINITY COLLEGE, DUBLIN.—At examinations held in Trinity term the following candidates were successful:—

FINAL MEDICAL EXAMINATION.

Part I.—William Pearson, Robert E. Wright, George F. Graham, John A. L. Hahn, Allman J. Powell, Frederick Stevenson, Henry de C. Dillon, Charles B. O'Rorke, Edward C. Stoney, Richard G. S. Gregg, James C. C. Hogan, Wilfred J. Dunn, Henry J. Keane, John W. Lane, William S. Thacker, John H. Morton, Edmund H. Sheehan, James E. M'Farlane, Joseph H. Elliott, and Eleanor E. Finegan.

Part II., Surgery.—John C. P. Beatty, Francis R. Coppinger, Thomas H. Peyton, Edward Gibbon, Lily A. Baker, Thomas L. de Courcy, Henry D. Drennan, George Dougan, Ernest C. Phelan, Ernest C. Crawford, Thomas J. Cobbe, John B. B. Whelan, and Ernest D. Caddell.

Part II., Midwifery.—Gustav W. Thompson, Edward Gibbon, Robert B. Jackson, Thomas L. de Courcy, Cecil T. Conyngham, Henry B. Leech, Henry D. Woodroffe, George Dougan, Wilfred L. Hogan, Thomas B. W. MacQuaide, Charles G. Sherlock, Theodore C. Somerville, Francis W. H. Bigley, Thomas J. Cobbe, John B. B. Whelan, Madeleine S. Baker, Albert J. T. M'Creery, James E. M'Farlane, Ernest C. Crawford, and Joseph H. Elliott.

INTERMEDIATE MEDICAL EXAMINATION.

Part I.—John L. Phibbs, Richard P. Hadden, Albert J. Stals, Thomas A. Hughes, Adams A. M'Connell, Herbert V. Stanley, Cecil P. Smyly, William A. R. Soong, Duncan B. Hunter, Peter H. Lemass, Arthur B. Laird, John D. Kernan, George B. M'Hutchison, William N. Watson, Richard J. Attridge, Eric J. Powell, Charles G. S. Baronsfeather, Frederick R. Sayers, and Harold T. Sugars. The Purser Medal in Institutes of Medicine was awarded to Richard P. Hadden.

PRELIMINARY SCIENTIFIC EXAMINATION.

Physics and Chemistry.—Herbert de L. Crawford, William L'A. English, Hilyard Muller, John H. Woodroffe, Edward P. Allman-Smith, Ralph T. St. J. Brooks, Roelof A. Albertyn, John Gardiner, Charles M. Finny, Adrian Stokes, David L. M'Cullough, George Elliott, Victor G. Best, Walter C. Adam, John Ronaldson, Marius A. Diemont, Arthur C. Hallowes, George F. C. Healy, James N. Greene-Nolan, Euphon M. Maxwell, Brindley H. Moore, and George J. Meldon.

Botany and Zoology.—Charles W. M'Kenny, Roelof A. Albertyn, William L'A. English, Adrian Stokes, Dorothea M. Franks, Benjamin A. Molyneux, Vicars M. Fisher, Charles M. Finny, John H. Woodroffe, Ernest W. G. Young, Francis J. A. Keane, Edmund F. Lawson, John Ronaldson, Thomas L. Bookey, Victor W. T. McGusty, Patrick Murphy, John G. Dods, James C. Kelly, Louis Trichard, Hugh M'C. Fleming, James M. Elliott, Henry P. Harpur, Frank Crosbie, and Edgar N. Bateman.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Rudolf Stähelin has been recognised as *privat-docent* of Medicine.—*Berlin:* Dr. Albert Plehn has been granted the title of Professor in recognition of his researches on malaria.—*Bonn:* Dr. Rudolf Klapp, one of the surgeons in the University Surgical Clinic, has been promoted to an honorary Extraordinary Professorship.—*Cracow:* Dr. F. J. Novotny has been recognised as *privat-docent* of Oto-Rhino-Laryngology and Dr. Adam Wrzosek as *privat-docent* of General and Experimental Pathology.—*Freiburg (Switzerland):* This University is shortly to be provided with a medical faculty.—*Göttingen:* Dr. Franz Schiek, *privat-docent* of Ophthalmology, has been granted the title of Professor.—*Heidelberg:* Dr. Ludwig Schreiber has been recognised as *privat-docent* of Ophthalmology. Dr. Martin Jacoby, *privat-docent* of Pharmacology, has been granted the title of Professor. Dr. Narath of Utrecht has been offered the chair of Surgery.—*Innsbruck:* Dr. Oscar von Wünscheim has been recognised as *privat-docent* of Hygiene.—*Munich:* Dr. Robert Rössle of Kiel has been recognised as *privat-docent* of Pathological Anatomy.—*Prague (Bohemian University):* Dr. Josef Cisler has been recognised as *privat-docent* of Rhinology and Laryngology.—*Strasburg:* Professor Chiari of Prague, who was well known to several generations of English and American post-graduate students while he was demonstrator of pathological anatomy in Vienna, has been appointed to succeed Professor von Recklinghausen in the chair which he is resigning.

THE PRESENTATION TO DR. A. E. JONES.—The movement recently instituted with a view to compensate Dr. A. E. Jones for his expenses in his late ordeal was brought to a conclusion on July 2nd, when a small gathering of subscribers was held at the house of Sir Victor Horsley, treasurer of the fund. Mr. John Tweedy, President of the Royal College of Surgeons, presided, and amongst those present were Dr. F. T. Roberts, Dr. H. Radcliffe Crocker, Mr. P. Sidney Spokes, Dr. Herbert Tilley, Dr. Andrew Duncan, Mr. George Pernet, and Mr. E. S. Weymouth. Mr. Tweedy, in presenting Dr. Jones with a cheque for £144, said that the meeting of Dr. Jones's professional friends embodied their deep sympathy with him in his recent terrible trial and symbolised their absolute confidence in his high integrity. The charge had been triumphantly disproved in a court of law and he congratulated Dr. Jones in the name of his professional brethren most heartily on the successful issue of a most painful experience. Dr. Roberts in a few remarks spoke of the high esteem in which he held Dr. Jones and added, as a former teacher, his congratulations. Dr. Jones made a short reply in which he said that apart from personal considerations all such movements as this were of the utmost value in forwarding the unity of the profession. He thanked the subscribers most heartily for their sympathy and support.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held on June 28th at Caxton House, Westminster, Dr. F. H. Champneys being in the chair.—A letter was read from the Local Government Board forwarding a copy of a communication from Mr. J. R. S. Park, medical officer of health of Dukinfield, as to the disinfection of the clothing of midwives who have been in attendance on cases of puerperal fever. After some discussion the matter was referred to the standing committee. A letter from Dr. E. Walford, medical officer of health of Cardiff, as to examining in Welsh was considered and it was decided that Dr. Walford should be asked to state whether in his opinion the difficulty experienced by certain Welsh candidates in taking their examination in English would be met by the presence of an interpreter at the oral examination. A letter was considered from Mr. J. E. Gordon, honorary secretary of the Salisbury division of the British Medical Association, inclosing copy of a resolution passed by the division as to the form of the record of sending for medical help prescribed by Rule E. 19 (b). The Board decided that Mr. Gordon should be informed that the Board has already forwarded to the Privy Council for its approval a draft revision of the rules which in part meets the objections raised to Rule E. 19 (b). The Board decided in regard to the question of holding examinations in Dublin that the Privy Council should be informed that the Board has carefully considered the memorandum handed to the Lord President during a recent visit to Dublin, urging the holding of the Board's examinations in Dublin. The Board is of opinion that it is not within the contemplation of the Act that any action should be taken by it outside the area defined by the Act and that therefore it would be acting *ultra vires* in holding any examination except at centres in England and

Wales. It would point out that the proposal to increase the examination fee above the present fee of one guinea if the examination were held in Ireland is contrary to Section V. of the Midwives Act. The Board suggests that as it is now proposed to defray the expenses of an examination in Dublin by a special contribution the difficulty might be met by those interested in the matter paying the travelling expenses of candidates to a centre in England.

ISOLATION HOSPITAL FOR TEIGNMOUTH.—Bilton Hospital, Teignmouth, which has been erected by the urban district council for the reception of infectious cases, was formally opened on June 28th in the presence of a large company. The hospital, which stands on an acre and a half of land, contains four wards, administrative block, laundry, disinfector, mortuary, &c. The cost of the building, exclusive of land, has been £2630, and the institution in case of emergency can accommodate 24 patients.

PROSECUTION OF A HERBALIST.—A herbalist of Cefn, South Wales, was recently prosecuted by the Society of Apothecaries of London for practising as an apothecary without being legally qualified. The defendant was fined the full penalty of £20, exclusive of costs. The herbalist in February, 1906, was censured by a coroner's jury at Cefn for having prescribed and sold medicines to a woman who had died from gastric ulcer and peritonitis.

WEST LONDON HOSPITAL AND POST-GRADUATE COLLEGE.—The annual dinner of this hospital and college was held on June 28th at the Trocadéro Restaurant, Piccadilly circus, London. Mr. Stephen Paget, surgeon to the hospital, presided, and a thoroughly enjoyable evening was spent by a large company. Among those present were Inspector-General H. M. Ellis (Director-General of the Royal Navy Medical Service), Fleet Surgeon Bell, Surgeon-General A. M. Branfoot, I.M.S., Mr. G. F. Marshall (chairman of the house committee of the hospital), Mr. Danvers Power, and many members of the past and present honorary staffs of the hospital. After the loyal toasts Mr. D. J. Armour, assistant surgeon to the hospital, proposed "The Imperial Forces" in a stirring speech, in the course of which he laid stress upon the prominent part played in the recent Boer war by his compatriots the Canadians. The Director-General of the Royal Navy Medical Service, in reply, said that the Royal Navy Medical Service owed a deep debt of gratitude to the West London Hospital, and more especially to those of its staff who were connected with the Post Graduate School. Many navy medical officers had, he said, passed through that school and many more were waiting to enter when the exigencies of the service permitted. The chairman then submitted the toast of the evening, "Prosperity to the West London Hospital," and alluded to the great development of the institution during the 50 years that had elapsed since it was inaugurated. The task of obtaining the necessary money, was he said, a great burden upon those who controlled its destinies, and he proceeded to sketch in terms of real eloquence the ideal building which he saw springing up on the site of the West London Hospital if only the necessary funds were forthcoming. Mr. Marshall replied and was driven to admit regretfully that although the story of the hospital was persistently one of progress the work of reconstruction was not going on unimpeded, for the London County Council had taken a course of action which would entail entirely new plans upon the building committee. Surgeon-General Branfoot then proposed "The Post-graduate College," and in doing so remarked that both the Navy and the Army Medical Services recognised the importance of post-graduate work but no body appreciated it more than the members of the Indian Medical Service. A large number of them sought the aid of the college for instruction in the up-to-date methods and treatment of disease. Mr. L. A. Bidwell, surgeon to the hospital and dean of the college, in reply, said that during the last 12 months 226 new members had joined the college and the total number of those who had worked there since its formation in 1893 was over 1000. Of these about 300 had been officers in the Navy, Army, and Indian Medical Services and 250 others had come from the colonies and foreign countries. Mr. C. A. Lees also replied to this toast, testifying warmly to the value that it was to the general practitioner to have the run of an institution where he was welcomed as a practical student of medicine. Mr. Danvers Power replied humorously to the toast of the guests, which was proposed by Dr. A. E. Russell; and Dr. G. P. Shuter carried his audience with him in a thoughtful eulogy of the merits of the chairman. Those present at the dinner were fortunate in having really interesting as well as brief speeches to listen to. Mr. Bidwell's figures, in particular, much impressed his hearers who came away convinced that the hospital and college were doing thoroughly good work with which it was an honour to be associated.

THE PROPOSED REMOVAL OF ST. GEORGE'S HOSPITAL.—At a meeting of a special court of governors on June 26th, held in the board-room of the hospital under the presidency of Lord Plymouth, the question of the removal or the rebuilding of St. George's Hospital was discussed. Mr. A. A. West, after referring to the large sum which the Duke of Westminster's estate board asked for their interest in the site, said that there were three alternative schemes. First, to remain where they were, carrying on their work as well as they could, which would cost £37,700; secondly, to buy up the leasehold interest of the houses at Knightsbridge, which would cost £120,000; and thirdly, to rebuild the hospital afresh on the present site which would cost £350,000. The minimum price that he suggested as the one at which it would be desirable to move was £400,000. If they did not sell their site, sooner or later they must appeal to the public for £350,000. He moved—

That this court thinks it advisable that the hospital should be removed to another site, provided a suitable one could be found at a certain figure.

If that motion were carried, he proposed to move that the sum at which it would be desirable to move was a minimum of £400,000. Mr. Thorp seconded the motion and a long discussion ensued. Lord Eustace Cecil said he did not think that the matter ought to go on until the whole of the governors had had an opportunity of carefully considering the formidable figures which had been placed before them. Mr. Timothy Holmes said that to keep the matter before the public would do an immense amount of injury to their present position. Two years ago they passed a resolution to the effect that it was not desirable in existing circumstances to remove the hospital from its present site and he asked the governors to act upon that resolution now. The Duke of Grafton suggested that the resolution passed two years ago should be reaffirmed and it was finally resolved:—

That this court having had no adequate offer for the hospital site submitted to it the resolution passed at the court of governors in 1904 be reaffirmed.

SOCIETY FOR THE PREVENTION AND CURE OF CONSUMPTION IN THE COUNTY OF DURHAM.—The seventh annual meeting of the governors of this society was held at the Sanatorium, Stanhope, on June 30th. Lord Barnard (the President) was in the chair and there was a good assembly of representatives from many places throughout the county. —Dr. W. Robinson (Sunderland), chairman of the committee, in moving the adoption of the reports, said that on the foundation of the society eight years ago exception was taken to its present name as consumption was then believed to be incurable but there were cured patients present who had been at work regularly for three, four, and even five years. The death-rate from consumption in the administrative county had diminished over 30 per cent. during the last 11 years owing to better housing and the wider recognition of the necessity for fresh air and sufficient ventilation, but there had been little reduction in the rate of the four county boroughs of Sunderland, Gateshead, South Shields, and West Hartlepool, because of the density of the population in their slums which are veritable hotbeds of the disease. As it was almost impossible to transform all these slums into healthy abodes he urged that special homes for advanced cases should be provided by the local authorities. The disease would then decline. Following the example of Brighton Manchester was about to utilise the empty wards of its fever hospital for this purpose and the medical officer of health, the speaker said, urges Sunderland to do the same. Tuberculosis caused 2522 deaths in the county in 1904, 1498 of which were due to disease in the lungs. The Stanhope Sanatorium contained 45 beds; 224 patients applied for admission but only 163 could be admitted. As there were between 5000 and 6000 consumptives in the county another sanatorium was much needed for women and children, so that the present one might be used for men only. Funds for this purpose were urgently needed. The Bishop of Richmond seconded the

adoption of the reports, which was carried. The address of the secretary is Mr. F. Forrest, 54, John-street, Sunderland.

APOTHECARIES' HALL OF IRELAND.—The summer medical examinations will commence with the First Professional on Monday, July 16th, 1906 All entries should be made at once with the Registrar, 40, Mary-street, Dublin.

PRESENTATION TO A MEDICAL PRACTITIONER.—On June 27th the members of the Camborne (Cornwall) branch of the St. John Ambulance Association presented Mr. William Blackwood, M.B., B.Ch. Edin., with a barometer suitably inscribed as a mark of appreciation of his services as honorary lecturer.

MEDICAL MAGISTRATES.—Mr. Hugh Lewis Hughes, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.S.A., of Dowlais, and Mr. Thomas William Thomas, M.R.C.S. Eng., L.S.A., of Caerphilly, have been, placed on the commission of the peace for the county of Glamorgan.—Mr. William Banks, M.B. Lond., M.R.C.S. Eng., has had his name placed on the commission of the peace for the borough of Falmouth but he has written to the town clerk stating that he does not desire the appointment.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Infant Life Protection.

A BILL to amend the Infant Life Protection Act, 1897, has been brought into the House of Commons by Mr. STAVELEY HILL, with the support of Sir JOHN KENNAWAY, Mr. ARTHUR LEE, Mr. CLAUDE HAY, Mr. WALROND, Mr. RAMSAY MACDONALD, Mr. HILLS, and Mr. NICHOLLS. The memorandum which has been issued with the printed text of the Bill explains its object. By the Infant Life Protection Act, 1897, a person receiving for hire or reward more than one infant under five years of age for the purpose of nursing or maintaining such infants apart from their parents for longer than 48 hours, or receiving an infant under two years of age to bring up in consideration of a sum of money not exceeding £20 paid down, is obliged to give notice thereof within 48 hours to the local authority, as defined in such Act. Such local authority is obliged to appoint inspectors to inspect such infants. Failure to give such notice renders the offender liable in the first-mentioned case to a fine of not less than £5 or to imprisonment for not more than six months and in the second-mentioned case only to forfeiture of the amount received. If any infant, as aforesaid, is kept in any house or premises which are so unfit or overcrowded as to endanger the child's health, or is retained or received by any person who by reason of negligence, ignorance, or other cause is so unfit as to endanger the child's health, the local authority may order the removal of the infant to the workhouse or a place of safety until the latter can be restored to the relatives or guardians or otherwise lawfully disposed of. The object of this Bill is to extend the provisions of the Act to cases where only one child is taken in to be nursed or maintained and to any child received in consideration of a sum of money paid down, whatever the amount may be; to raise to seven years the age limit of children within the Act; to render any person failing to notify the reception of an infant, adopted in consideration of a lump sum payment, liable to fine or imprisonment as above mentioned, as well as to forfeiture of the amount received; to make it clear that the inspection of children within the Act shall extend up to their reaching seven years or earlier removal by the local authority; to enable the local authority to remove an infant kept by a person who is unfit, by reason of character or otherwise, to have such care and maintenance, or who is in a house or premises unsuitable for the purpose, although such person or premises are not so unfit as to endanger the child's health; and to require notice to be given of all changes of residence of a person having the care or custody of children within the Act under penalty of imprisonment or fine.

The Board of Education and the Vaccination of Teachers.

In the new code of regulations for public elementary schools issued on June 30th by the Board of Education a decision of importance is announced with reference to the vaccination of teachers. It is stated that it has been represented to the Board that in view of recent legislation with regard to vaccination there is a hardship in the continuance of its long standing requirement that every teacher or pupil teacher employed in a public elementary school shall have been duly vaccinated. While the Board feels that it is not unreasonable to take greater precautions against infection where a number of children are brought together within the limited space of a schoolroom than might be necessary in other circumstances it is prepared to leave the responsibility in this matter to the local education authorities by whom the teachers are employed. It has therefore inserted a provision in the Code relaxing the obligation to be vaccinated in the case of teachers who have declared themselves to have a conscientious objection to vaccination. A similar provision has been inserted in the regulations for the instruction and training of pupil teachers. The fact that such a teacher is unvaccinated will in all cases be kept on record by the Board and it must be clearly understood that the Board will not recognise any such teacher in any school except with the consent of the local education authority, whose duty it will therefore become to satisfy itself that the precaution of vaccination may be dispensed with without risk to the children with whom the unvaccinated teacher may be brought into contact.

Another Bill for the Registration of Nurses.

Mr. CLAUDE HAY has brought forward a Bill to regulate the qualification and registration of nurses. There is, of course, no chance of its becoming law or even of its being discussed in Parliament this session, but the text is being circulated for the information of Members generally. The operative clauses are these: 1.—(1) From and after the first day of January, one thousand nine hundred and eight, no person shall practise as a registered nurse unless such person be registered under this Act; any person so acting, without being registered under this Act, shall be liable, on summary conviction, to a fine not exceeding ten pounds. (2) No person shall be registered under this Act until such person has complied with the rules and regulations to be laid down in pursuance of this Act, and unless such person shall have attained the age of twenty-four years, and shall have had a training at a recognised training school for nurses for a period of not less than three years, and shall produce a certificate from a training school to the effect that the curriculum laid down by the Central Board has been complied with, and shall also pass the examination prescribed by the Central Board. 2. Any person who, within two years from the date of this Act coming into operation, claims to be registered under this Act, shall be so registered provided that such person holds a certificate of at least two years' training from any institution recognised by the Central Board, or produces evidence, satisfactory to the Board, that, at the passing of this Act, such person had been for at least five years in *bonâ fide* practice as a trained nurse, and bears a good character, and produces testimonials of efficiency satisfactory to the Central Board from three registered medical practitioners under whom she has worked. 3. Any person who shall produce evidence satisfactory to the Board of having been trained as a nurse in any part of the British dominion beyond the seas, shall be registered, provided that such person shall have passed an examination approved by the Board, and bears a good character, and shall comply with the provisions of this Act with regard to the payment of fees, provided also that such part of the dominion admit to its register British registered nurses on reciprocal terms. 4. On the passing of this Act, the Lord President of the Council shall take steps to secure the formation of a Central Board, which shall consist of—(1) One lay person to be appointed for a term of three years by the Lord President of the Council to represent the general public. (2) One registered medical practitioner to be appointed for a term of three years by the Lord President of the Council, to represent the hospitals and infirmaries of Great Britain and Ireland. (3) One registered medical practitioner to be appointed for a term of three years by the English members of the General Medical Council as the representative for England. (4) One registered medical practitioner to be appointed for a term of three years by the Scottish members of the General Medical Council as the representative for Scotland. (5) One registered medical practitioner to be appointed for a term of three years by the Irish members of the General Medical Council as the representative for Ireland. (6) One registered medical practitioner to be appointed for a term of three years by the Council of the Medico-Psychological Association of Great Britain and Ireland. (7) One representative to be appointed for a term of three years by the Council of the Royal British Nurses' Association. (8) One representative to be appointed for a term of three years by the Council of the Queen Victoria Jubilee Institute. (9) One registered medical practitioner to be appointed for a term of three years by the Council of the British Medical Association. (10) Three registered nurses who are past or present matrons of any hospital or infirmary in the United Kingdom (other than hospitals for fever or infectious cases) which contains not fewer than one hundred beds, and where nurses are trained and granted a certificate of such training, to be elected for a term of three years, one of such registered nurses to be elected by and representative of the matrons of such hospitals and infirmaries in England and Wales, one of such registered nurses to be elected by and representative of the matrons of such hospitals and infirmaries in Scotland, and one of such registered nurses to be elected by and representative of the matrons of such hospitals and infirmaries in Ireland. (11) One registered nurse who is past or present matron of any hospital in the United Kingdom for fever or infectious cases, where nurses are trained and granted a certificate of such training, to be elected for a term of three years by the matrons of such hospitals. (12) Three registered nurses to be elected for a term of three years by the registered nurses resident within the United Kingdom, one of such registered nurses to be elected by and representative of the registered nurses resident in England and Wales, one of such registered nurses to

be elected by and representative of the registered nurses resident in Scotland, and one of such registered nurses to be elected by and representative of the registered nurses resident in Ireland.

HOUSE OF COMMONS.

WEDNESDAY, JUNE 27TH.

The Poisons and Pharmacy Bill.

Mr. WINFREY asked the Prime Minister whether, having regard to the fact that in addition to the Government Poisons and Pharmacy Bill there was in the House another Bill for amending the Pharmacy Acts and that both Bills were objected to in their present form, he would arrange for the two Bills to be referred to a Select Committee, so that a full investigation of the subject matter of the Bills might be assured.—Mr. GLADSTONE answered: My right honourable friend has asked me to answer this question. I do not think there is any need to refer the two Bills to a Select Committee. The points needing detailed investigations have already been fully considered by a departmental committee and the facts relating to the questions arising on Clause 4 of the Poisons and Pharmacy Bill are already fully known and do not require further investigation by a committee.

The Care of Criminal Lunatics.

Mr. MARNHAM asked the Secretary of State for the Home Department whether, in view of the recent murder at Camberley and the propinquity of His Majesty's Broadmoor Criminal Lunatic Asylum, greater care would be taken in future to ascertain that prisoners before being discharged could with safety to the general public be allowed at large.—Mr. GLADSTONE answered: I can assure the honourable Member that there is no ground for the suggestion that there is any want of care in discharging criminal lunatics from Broadmoor. If a lunatic is confined "during His Majesty's pleasure"—so that he can be discharged only by order of the Secretary of State—the utmost care is taken in the few cases where the question of release can be entertained at all, to ascertain that the patient's recovery is of a permanent character and that he can be allowed at large without danger to the public. An undertaking is obtained from some trustworthy relative or other person to look after the patient and to report periodically how he is, and if any sign of a relapse is reported the discharge is revoked and the patient brought back. There are, however, some criminal lunatics not detained during His Majesty's pleasure but under sentence for a definite term only. These cannot, generally speaking, be detained in Broadmoor after the sentence expires. They have to be removed to local asylums and then are under the ordinary lunacy law. I have no longer any control over their discharge which rests with the local asylum authorities.

THURSDAY, JUNE 28TH.

Sleeping Sickness.

Mr. CATHCART WASON asked the Under Secretary of State for the Colonies whether, in view of the continued prevalence and fatal character of sleeping sickness about Entebbe, he would consider the advisability of removing the seat of Government from there to Kampala, the ancient and more convenient capital, and less exposed to the disease.—Mr. CHURCHILL answered: We have not been led to form the opinion that Kampala would be a more convenient capital or less exposed to the disease of sleeping sickness.—Mr. CATHCART WASON also asked the Under Secretary of State for the Colonies whether any steps were being taken in Uganda to prevent the spread of sleeping sickness by drawing cordons round infected districts, by destroying the breeding places of the particular fly that carried the disease, or especially by discouraging settlement round the lake or by stagnant water.—Mr. CHURCHILL replied: The very full and careful investigations which, as the honourable Member is no doubt aware, are being conducted under the supervision of the Royal Society do not indicate that it will be practicable to prevent the spread of sleeping sickness by the methods referred to in the question. The Secretary of State is advised that the only means of arresting the spread of the disease which would be practicable would be by the discovery of some treatment, curative or preventive, capable of being applied to man. This matter is now engaging the attention of the Tropical Diseases Committee of the Royal Society.—Mr. CATHCART WASON further asked the Under Secretary for the Colonies whether he was aware of the fact that sleeping sickness had almost depopulated the islands in Lake Victoria; that recently a forest concession had been granted of a large island there; and whether, in order to save natives from risk of death from employment on the concession and to prevent the spreading still further of the disease, stringent instructions would be transmitted to the Commissioner.—Mr. CHURCHILL replied: It is lamentably true that sleeping sickness is rife on Lake Victoria, though I cannot say whether any islands have been actually depopulated. No report of the concession referred to by my honourable friend has yet been received.

Medical Officer for Glasgow Post Office.

Mr. WATT, on behalf of Mr. CLELAND, asked the Postmaster-General whether he was now in a position to state the number of medical officers he proposed to appoint to carry out the duties formerly performed by the Post Office medical officer for Glasgow and the respective districts he proposed to allocate to each: and whether, having regard to the present position of affairs, he could see his way to expedite the appointments proposed to be made.—Mr. BUXTON, in reply, said: I propose to appoint six medical officers for Glasgow. Full particulars of the respective districts can be obtained by candidates from the Postmaster of Glasgow. In regard to the latter part of the question I will answer it in reply to a question of which notice has been given by Mr. Lamont.

Mr. LAMONT asked the Postmaster-General whether he could now see his way to fill the vacant posts of medical officers to the Glasgow post-office in order to relieve Scottish Members of the burden of correspondence placed on them by the applications of medical men from all parts of the country.—Mr. BUXTON replied: As soon as it was possible to decide into how many districts Glasgow should be divided for medical purposes instructions were at once given that the six vacancies should be advertised in the usual way and that applications be invited within seven days. These applications are to be sent to the Postmaster at Glasgow and applications already received, either locally or at headquarters, will be considered unless in view of the altered circumstances they are withdrawn. The appointments will be made as soon as possible; but the number of applications is enormous and the selections will necessarily take time. I am anxious to relieve honourable Members of the burden of correspondence thrown upon them in connexion with these medical and other appointments for their own sake, and, I may add, for my own also. I ventured to suggest in the House in the debate on the Post-office Estimates that the present system of approaching Members in order that they should bring pressure to bear in regard to these and other appointments was very much to be deprecated and I hope I shall have the general sense of the House in discouraging the system so far as possible.

Mr. WATT asked the Postmaster-General whether he had taken into consideration the advisability of appointing one or more female doctors to the position of medical officers to the Post-office at Glasgow.—Mr. BUXTON said: I do not think it would be advisable to appoint female medical officers to any of the six districts into which Glasgow will be divided.

The National Vaccine Establishment.

Sir WILLIAM COLLINS asked the President of the Local Government Board whether he would grant a return showing so far as was known the original sources of the various stocks of lymph which had been, or were being, employed by the National Vaccine Establishment, indicating those strains which were no longer in current use.—Mr. JOHN BURNS answered: As I have stated in reply to previous questions, the usual method of renewing lymph supplied from the National Vaccine Establishment is by vaccinating calves with vaccine lymph obtained from children, but in some instances the lymph has been obtained from abroad, and in such cases it would usually not be practicable to give its original sources. In these circumstances I do not think that a Parliamentary return of any value could be given. I may, however, state that in no case is lymph used at the establishment unless it has been passed through a series of calves.

MONDAY, JULY 2ND.

Queen Alexandra's Imperial Military Nursing Service.

Mr. MORTON asked the Secretary of State for War whether he proposed to make reductions in the Queen Alexandra's Imperial Military Nursing Service, seeing that the numbers employed in military hospitals were far in excess of the requirements of the sick and that much public money could be thereby saved.—Mr. HALDANE replied: The establishment of the Queen Alexandra's Imperial Military Nursing Service was fixed to provide for the efficient nursing of the sick in military hospitals at home and abroad and to establish in connexion with these hospitals nurse training schools for the men of the Royal Army Medical Corps. Increased responsibilities in both respects have been delegated to the nursing service. The distribution of the staffs has been decided upon by the civil matrons of the Nursing Board and all matters relating to army nursing form the subjects of recommendation by that board and the number is not, in the opinion of my expert advisers, in excess of the requirements. It must be remembered that the standards of the medical care and treatment which are requisite for the sick have risen during the last few years and that the improvement is resulting not only in more humane methods but in a saving of public money which is not less substantial because it is indirect.

Vaccination Exemptions.

Mr. LUPTON asked the Secretary of State for the Home Department whether Captain Gravener, who said he would not give certificates of exemption from vaccination, was still a magistrate; whether his attention had been called to Dr Tinker, a magistrate sitting on the Hyde bench, who declared on June 25th, 1906, a conscientious objection to give certificates of exemption from vaccination; and whether he would take any steps to enforce the law.—Mr. GLADSTONE answered: I am informed that Captain Gravener stated that he would not sit when applications for certificates of exemption were under consideration. When the matter was first brought to my notice I sent the papers to the Lord Chancellor and there is no further action for me to take in the matter. I have made inquiry into the case at Hyde referred to by my honourable friend and I find that after some conversation with the applicant Dr. Tinker withdrew from the bench and the applicant was told to come again when two other justices were present. Dr. Tinker does not refuse to carry out the law. These cases and others to which my attention is constantly being drawn illustrate the chronic friction which is caused by the present state of the law with regard to exemption certificates.

Medical Officer in Skye.

Mr. JOHN DEWAR asked the Secretary for Scotland whether he was aware that at Uig, in Skye, on the estate of the Congested Districts Board, there was no proper residence for the medical officer and that in consequence, there was difficulty in retaining the services of a doctor in the district; and whether he would use his influence with the Congested Districts Board to induce it to put one of the houses belonging to it in Uig at the disposal of the medical officer.—Mr. SINCLAIR answered: The responsibility of the Congested Districts Board in this matter is simply that of any other landlord in the district and at present I regret to say that there is no prospect of the Board being able to provide a house for this purpose, but I am aware that the difficulty in such cases is a real one. To enable the parish council by whom the doctor is employed to meet it legislation will be necessary and I will consider whether or not steps should be taken in this direction.

Medical Men and Vaccination.

Mr. LUPTON asked the President of the Local Government Board whether he would treat the publication by a qualified medical man of an opinion adverse to vaccination as a bar to his appointment as medical officer of health, as was done in the Penge district council case in April, 1901; and, if the answer be in the affirmative, whether he would state how he proposed to safeguard the free expression of scientific opinion by medical officers of health.—Mr. JOHN BURNS replied: I cannot give a general answer on the point referred to in the first part of the question. If it comes before me in any particular case I shall be prepared to consider it.

"Spotted Fever" in Glasgow.

Mr. CHARLES SCHWANN asked the President of the Local Government Board whether repeated cases of "spotted fever" had occurred for some months in Glasgow; and, if so, whether he would consider the desirability of requiring that the disease shall be placed on the list of those for compulsory notification, not merely in Glasgow but as a general order.—Mr. JOHN BURNS replied: The

Infectious Diseases (Notification) Acts do not empower the Local Government Board to issue a general order making a disease compulsorily notifiable, and I am advised that in present circumstances there would be no need for any such general order as regards the particular disease referred to in the question. With the approval of the Board, however, action for the purpose of making this disease notifiable may be taken by any sanitary authority in England and Wales (with which alone I am concerned) so far as relates to the district of the authority, and in August last the Board issued a circular to the several authorities stating that it would be prepared to consider an application for its approval to an extension of the Act to the disease should the sanitary authority desire, in view of any special circumstances, to make the necessary application. Some applications of the kind have since been made and approved.

TUESDAY, JULY 3RD.

False Descriptions of Brandy.

Mr. T. M. HEALY asked the Chancellor of the Exchequer whether he would state what precautions the Customs take to enforce the provisions of the Merchandise Marks Act as regards brandy; what check there is against the use of false trade descriptions; if any test is applied and what is it to ascertain whether spirit entered as brandy is derived from the grape or from materials other than the grape; how many gallons of spirit imported from Hamburg were admitted to entry last year as brandy; was such spirit the distillate of the grape; how many seizures were made last year of brandy to which a false trade description was applied under the Merchandise Marks Act; what was the quantity of brandy as per Customs entries from Norway, Holland, and Denmark for the last ten years; and is it the case that at London docks any spirit, whatever its origin, shipped as brandy is so entered by Customs and dock officials.—The CHANCELLOR OF THE EXCHEQUER replied: The means taken by the officers of Customs to prevent imported spirits being falsely described as brandy in contravention of the Merchandise Marks Acts are to examine all spirits entered as brandy and if such do not appear to be the brandy of commerce to submit samples to the departmental analyst. No test is applied to ascertain whether spirit entered as brandy is derived from the grape or from other materials but tests are applied to ascertain whether such spirits contain those constituents other than spirit which characterise the brandy of commerce. If such constituents are not present the spirit is not allowed to be entered as brandy. Particulars of the quantity of brandy imported from Hamburg are not available, the records of imports being shown under countries only. During the year 1905 two consignments of spirits described as brandy were seized under the Merchandise Marks Act, 1887, for having a false trade description applied. The quantity of brandy imported into the United Kingdom from Norway, Holland, and Denmark during the last ten years was as follows:—

Years.	Norway.	Netherlands.	Denmark.
	Proof gallons.	Proof gallons.	Proof gallons.
1896	3,032	34,012	9,481
1897	66	35,756	26,442
1898	2	22,066	11,142
1899	641	24,330	23,058
1900	6,363	22,446	2,824
1901	3,342	17,410	1,186
1902	3,164	14,521	1,688
1903	4,599	8,276	32
1904 Imported ...	294	7,033	32
1904 Consigned ...	292	3,564	32
1905 Imported ...	1,923	5,947	61
1905 Consigned ...	1,928	2,320	61

As will be seen from what is stated above it is not the case that at the London Docks or elsewhere any spirit, whatever its origin, shipped as brandy is allowed by the Customs Department to be entered as brandy. The Board has no official knowledge as to the action of the dock officials with regard to such spirits.

SELECT COMMITTEE ON JUVENILE SMOKING.

The Select Committee of the House of Lords, which was appointed, under the chairmanship of Earl BEAUCHAMP, to consider the Juvenile Smoking Bill introduced by Lord REAY and was further empowered to deal with the question of juvenile smoking generally and its effect on the physical condition of children, and to report whether any, and if so what, alterations in the law were desirable or practicable with a view of stopping the sale of tobacco and cigarettes to children below a certain age, commenced the hearing of evidence on June 26th.

Mr. BOWICK, treasurer of the Hygienic League, spoke in favour of the Bill, although he thought that the parent and the child should share the onus that was put upon the trader.

The Rev. B. S. LOWE, representing the R.E.D. Brotherhood, a movement aiming at the influencing of boys by other boys, gave evidence as to the sufficiency of moral suasion without legislative enactment.

Dr. WIGMORE, a member of the executive committee of the Hygienic League, stated that that organisation was in favour of legislation to prevent juvenile smoking and apparently there was a very strong parental opinion behind the movement. Boys were smoking a good deal more than they used to do and they were deteriorating in consequence. Girls were not deteriorating so much. After speaking of some of the physical effects of smoking he said he would propose that power should be given to flog boys under the Juvenile Offenders Act. The slot machines proved a temptation to youths and he would prohibit tobacco or cigarettes from being on sale in such machines.

Professor G. SIMS WOODHEAD of the University of Cambridge said that he had given attention to the subject and had studied the results of the experiments at Yale, and he was convinced that smoking did interfere with the development of the growing child. There was a distinct difference in weight and chest measurement as between smokers and non-smokers. As to the immediate effect of smoking the nerve cells appeared to be slightly stimulated, but as soon as that condition passed off there was a distinct depressant action. Some other narcotics had very much the same action as nicotine which was one of the most harmful in general use. The nerve cells in the brain played a very important part in respiration, the action of the heart, and the functions of nutrition. The nicotine acted on the terminal nerves and they got alterations in the secretion of the mucous membrane. In addition to that the spinal cord seemed to be affected. Nicotine had the effect of interfering with the oxidation of the tissues. The mental activity of the child, owing to the depression of the nerve cells, was certainly impaired, as well as the desire for physical exercise. It was well known that tobacco, in the case of the adult, interfered with the function of the eye in regard to the perception of colour and the field of vision. They also found a structural change leading to amblyopia. One other effect was the throwing of extra work on the kidneys. Altogether he looked upon the action of tobacco on the child as very complicated. The cumulative results on the different parts of the body were very serious. Very minute quantities of nicotine had a very serious effect.

The CHAIRMAN: What quantity is there in a dozen ordinary packets of cigarettes?—Probably enough to poison if given all at once, or enough to produce very severe symptoms.

By Lord ABERDARE: He agreed with the opinion expressed by a well-known physician, which was alluded to in a circular issued by the Edinburgh School Board, to the effect that the cigarettes which boys chiefly used were rank poison.

Lord HENEAGE: Would you consider cigarette smoking a great deal more harmful to young people than common tobacco?—There is a difference in the way in which they are burned. In cigarette burning there is rather more perfect oxidation of the tobacco and therefore the effect is not the same as with the pipe but the paper products have probably a worse effect. As regards the combustion of the tobacco I do not believe it is quite so poisonous in the cigarette as in the pipe but the products of the paper are irritant and might have a rather serious effect.

The practical effect on the boy would be worse from the cigarette than from the pipe?—I should not like to commit myself to that.

Continuing, he said that he had taken the trouble to find out medical opinion and it was strongly against smoking by children. It was better for people not to smoke until after the age of 21 years. The public, he thought, would support very strong measures and he was generally in favour of the Bill. He did not think it was hard on the tradesman that the onus of proof of age should lie with him because the tradesman was giving tobacco to the child knowing that it would do harm.

By Lord ABERDARE: If this matter of juvenile smoking were not taken in hand the results in another generation might possibly be very serious.

By Lord HENEAGE: He did not think that the force of public opinion among the boys themselves would be sufficient to stop the vice.

Sir WILLIAM BROADBENT said that he agreed as to the desirability of preventing as far as possible smoking in early life.

The CHAIRMAN: The age of 16 or 17 has been suggested as a limit as well as 21?—I should prefer it to be 21 although the worst of the mischief is done before 16.

We are told that the general deterioration is not so observable amongst girls as amongst boys?—That is quite true.

Is one of the reasons smoking?—I should have no doubt that that entered into the causation.

As to the general results of juvenile smoking he had seen it affecting the circulation, the nervous system generally, and the digestion. As far as his personal experience went he saw more tobacco amblyopia among grown-up people than young people.

You do not think it causes cancer?—No, certainly not in the young. It is a very common cause of indigestion.

Drinking and smoking very often went together. Self-indulgence in one thing led to self-indulgence in another. Smoking excited thirst, lowered the general tone, and made a man much more ready to give way to the desire for stimulants. While he admitted that smoking entered into the causation of deterioration there were other factors more important, such as the want of ventilation, improper food, and the absence of exercise. These were more important, he thought, than the specific influence of smoking or self-abuse. Smoking weakened the heart and lowered the circulation generally. It rendered the heart more liable to disturbance and the digestion was affected. There was the serious matter of giving way to habits of self-indulgence and boys were led to concealment and to habits of deceit.

By Lord BIDDULPH: The effects of smoking were not immediate; it was the establishment of the habit that was of serious importance.

By Lord HENEAGE: Smoking was doing a great deal of harm among adults and it was most desirable that there should be some prevention of juvenile smoking. Cigarettes did more harm than pipes because the smoke was often inhaled.

Mr. M. D CHALMERS, Under Secretary of the Home Office, said that although every one was generally agreed that smoking was injurious to the young it would be satisfactory to all concerned if evidence of a specific nature were gathered. Medical men, perhaps, might give evidence as to specific cases of injury to young persons. He proceeded to criticise in some detail the provisions of the Bill.

Mr. J. L. PATON, high master of Manchester Grammar School, stated that the smoking habit tended to make boys selfish and deceitful. It also tended to reduce the will power and to make boys indolent and disinclined to take part in athletics. He suggested that power should be given to the elementary school teachers and to policemen and park officers to confiscate cigarettes seen in the possession of boys.

The Committee adjourned.

The Committee resumed the taking of evidence on June 29th.

Sir RALPH LITTLER, K.C., was the first witness. He stated that he was quite convinced that the smoking of cigarettes by young boys was ruinous to their physical well being and he would be glad to see the practice put down by legislative measures. He did not think that there would be any objection to give the police powers to search a lad if they thought that he had cigarettes on his person, or to take away his cigarettes if they found him smoking.

Dr. MACNAMARA, M.P., was also called as a witness. Examined by

the chairman he spoke of his objections to the habit of smoking cigarettes which prevailed amongst boys and immature youths. He was of opinion that the police should be invested with powers to take away cigarettes from boys when they found them smoking. One of the most objectionable and filthy forms of juvenile smoking, which in particular required checking was when a boy picked up the end of a cigarette from the gutter and began to puff it. This practice ought to attract the vigilance of the police. Although he would give the police power to confiscate the cigarette he did not think that they should inflict punishment on the juvenile offender on the spot. He did not agree that statutory powers should be given to members of the general public to take away cigarettes from boys, although he had admitted that he had done so himself. He knew that objection had been taken to the proposal to abolish the licence of a tobacco seller after his third conviction for supplying juveniles with cigarettes, but he did not know if that would meet the case. In the matter of penalties the Bill might be a little drastic. However, the magistrate might have power to take away a tobacconist's licence if he sold cigarettes to boys after repeated convictions and ineffectual warnings.

The CHAIRMAN: On the general question of physical deterioration we have been told that it has not been so marked amongst girls as amongst boys. Would you agree, after the evidence that has come before you, that this was the case?

Dr. MACNAMARA: I should think it is so. The facilities for the physical training of girls, he proceeded to say, had enormously improved in the last ten years in schools, both elementary and secondary. He should say that the average girl now got as good a physical training as her brother if not a better one.

The CHAIRMAN: We have been told that one reason of physical deterioration amongst boys is that they smoke so much.

Dr. MACNAMARA: I have certainly been very much struck by the increase of smoking cigarettes amongst boys. When I was a schoolmaster in 1882 there was practically no cigarette smoking at all amongst them. The whole thing had developed in the last ten years. It was still rapidly developing. As to the deteriorating effects the committee has had evidence showing the effect of it upon the nerves, the heart, and the eyes in the case of unformed youths. It was the case, unfortunately, that tobacco-sellers had recently laid themselves out very much to cater for children.

At this point Dr. MACNAMARA produced a packet of cigarettes which, he said, were specially designed for children and which he handed to the Chairman for examination. Witness proceeded to say that this packet containing five cigarettes was sold for 1*d.* and the shopkeeper also provided a small box of matches and a clay cigarette holder. It was perfectly obvious that the tobacco in cigarettes at five for 1*d.* could not be of a superior quality. Any of their lordships could test the quality of these cigarettes for himself. He thought it would be wise to adopt a clause in the Bill similar to the messenger clause in the Sale of Intoxicating Liquors to Children Act.

Mr. W. TODD, secretary to the Scottish Anti-Tobacco Society, Edinburgh, having expressed himself strongly in favour of legislation to put down cigarette smoking amongst boys, handed to the committee excerpts from THE LANCET in support of his contentions.

Mr. LENNIE, Secretary to the Sweetmeats Automatic Delivery Company, made a statement to the effect that the withdrawal of cigarettes from sale in the machines of his company at railway stations would be ruinous to it financially. The cigarettes in these automatic delivery machines were sold at the rate of two a 1*d.* and he did not think that they constituted a great temptation to boys. The cessation of this traffic in cigarettes would be a hardship to the travelling public.

Mr. JOHN KIRK, Secretary to the Ragged School Union, in his evidence told the committee that he knew of many cases where boys went without food in order that they might be able to purchase cigarettes. He advocated speedy legislation to cope with the evil.

Mr. A. P. SAUNDERS of Stafford stated that from his experience as a schoolmaster he could pick out the boys in a school who were suffering from tobacco heart by the flabby character of their handwriting.

Mr. W. R. DANIEL, speaking on behalf of the Wholesale Tobacconists Protection Association, claimed that the trader should be entirely exempt from penalties in connexion with the selling of cigarettes. The entire responsibility for juvenile smoking should rest on the boy as culprit and on the police as prosecutors. He did not think that juvenile smoking was on the increase.

The Committee adjourned.

The Select Committee heard further evidence on July 3rd, Earl BEAUCHAMP being in the chair.

Mr. JOHN LINDSAY, solicitor and town clerk depute of Glasgow, gave evidence with respect to the steps which had been taken during the last two years by the corporation of Glasgow and the school board of Glasgow with the aim of obtaining legislation to put down juvenile smoking. Widespread support was given to the efforts of the corporation by other Scottish municipalities and deputations representing many Scottish local authorities and organisations had on two occasions waited upon the Lord Advocate of the day to press their views against juvenile smoking. On the occasion of the last deputation in the spring of this year the public bodies represented at it were, with the qualified exception of the Glasgow school board, quite satisfied with the provisions contained in Dr. Macnamara's Bill for the Prevention of Juvenile Smoking. They felt convinced that if a law were passed prohibiting dealers in tobacco from selling or supplying the same to children under the age of 16 years a great deal of the evil affecting the tobacco habit would be arrested. The school board of Glasgow thought that a penalty clause should be provided in the case of children, but they admitted that the provisions of the Bill would be beneficial. The most progressive municipalities in Scotland were in favour of legislation against juvenile smoking.

Mr. E. P. GASTON (London), manager of Messrs. Funk and Wagnalls, publishers, gave evidence with respect to the legislation in existence in the United States of America for the prevention of juvenile smoking. The first legislation took place in 1888 and now 47 out of the 53 States and territories had enactments on the subject. The cigarette was an acute issue in America because of the cheap tobacco which was ordinarily employed in making it and because of the dirty surroundings in which the tobacco was gathered and made up and also the amount of drugging which it underwent. Speaking roughly, cocaine and laudanum were amongst the drugs which were used.

The CHAIRMAN: What is the object of these drugs? Is it to make the taste better or to disguise the materials of which the cigarette is made?

WITNESS: By the use of some of the drugs the sense is peculiarly benumbed and they act as a sedative immediately the cigarette is applied to the lips. Proceeding he said that the trend of American sentiment was that there should be some penalty on the parent who permitted his children to use tobacco. The general effect of the laws against juvenile smoking in America had been good. The American cigarette was the worst thing which the United States sent to this country—worse than Chicago tinned meat. In his opinion this country should enact strict legislation against the bad cigarette specially imported from the United States.

This concluded the evidence and the committee then sat in private to give consideration to Lord Reay's Bill.

BOOKS, ETC., RECEIVED.

BRUYLANT, EMILE, 67, Rue de la Régence, Bruxelles. (OCTAVE DOIN, 8, Place de l'Odéon, Paris.)

Anatomie Clinique et Technique Opératoire. Par le Dr. O. Laurent, Professeur de Médecine opératoire à l'Université de Bruxelles, Chirurgien des Hôpitaux de Bruxelles. Price not stated.

BURROW, EDWARD J., Pittville Gates, Cheltenham.

Burrow's Royal Series of Official Albums. No. 7. Cheltenham: the Garden Town. Written by Dr. J. H. Garrett, M.D., M.O.H., Cheltenham. Fifth edition. Illustrated. Published under the Auspices of the Corporation of Cheltenham and the Cheltenham Chamber of Commerce. Price 1*s.*

CHURCHILL, J. AND A., 7, Great Marlborough-street, London, W.

Medical and Pharmaceutical Latin. For Students of Pharmacy and Medicine. By Reginald R. Bennett, Pharmaceutical Chemist; Pharmacist and Teacher of Pharmacy at University College Hospital, London. With an Introduction by Henry G. Greenish, F.I.C., F.L.S., Professor of Pharmaceutics to the Pharmaceutical Society of Great Britain. Price 6*s.* net.

TIP. EDIT. E. TRAVERSARI, Empoli (Florence), Italy.

Plastica e Protesi Cinematiche. Nuova Teoria sulle Amputazioni e sulla Protesi. Price L.5.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

FOSS, EDWIN VINCENT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 9 District by the Bristol Board of Guardians.

FRESHNEY, R., M.B. Syd., has been appointed Government Medical Officer for Toowoomba, and Official Visitor to the Westbrook Reformatory, Queensland, Australia.

GRAY, A. M. H., M.D., B.S. Lond., has been appointed Resident Medical Officer at University College Hospital.

MCDONNELL, ÆNEAS J., M.D. Syd., has been appointed Senior Honorary Surgeon to Toowoomba Hospital, Queensland, Australia.

ODGERS, N. B., M.B., M.Ch. Oxon., F.R.C.S. Eng., has been appointed Assistant Surgeon to the General Hospital, Northampton.

RAMSAY, A., M.B., M.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Leadhills and Wanlockhead District of the counties of Lanark and Dumfries.

RING, C. A. R., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer by the Okehampton (Devon) Board of Guardians; also Certifying Surgeon under the Factory and Workshop Act for the Hatherleigh District of the county of Devon.

ROSE, FRANK A., M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Surgeon to the Ear and Throat Department with Charge of Out-patients at the Great Northern Central Hospital.

SMITH, S. MAYNARD, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Surgeon in Charge of Out-patients at St. Mary's Hospital.

SUTHERLAND, J. R., M.B., Ch.B. Glasg., has been appointed Junior House Surgeon at the Blackburn and East Lancashire Infirmary.

WILSON, A. GARRICK, M.B., M.C. Cantab., F.R.C.S. Eng., has been appointed Surgeon to the Sheffield Children's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

BURNLEY, VICTORIA HOSPITAL.—Resident Medical Officer. Salary £100, with residence, board, and washing.

CANCER HOSPITAL, Fulham-road, London, S.W.—Medical Officer in Charge of Electrical Department. Honorarium £26 5*s.* per annum.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Assistant Surgeon. Also Third Assistant Anæsthetist.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board, residence, &c.

DERBY, DERBYSHIRE ROYAL INFIRMARY.—Assistant House Surgeon for six months. Salary £30, with board, residence, and washing.

EGYPTIAN GOVERNMENT, MINISTRY OF EDUCATION.—Professor of Midwifery and Gynæcology. Salary £400 a year. Also Medical Tutor and Registrar to Kasr-el-Ainy Hospital. Salary £400 a year.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeoncy. Salary at rate of £30 per annum, with board, residence, and washing.

GREAT NORTHERN CENTRAL HOSPITAL.—Ophthalmic Surgeon.

HARTLEPOOLS HOSPITAL.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Assistant House Surgeon for six months. Honorarium £20, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence. Also Assistant Casualty Medical Officer, unmarried, for six months. Salary £20, with board and residence, &c. Also Radiographer.

HOSPITAL FOR WOMEN, Soho-square, W.—Medical Registrar. Honorarium 25 guineas.

HULL, ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50 per annum, with board and lodging.

LIVERPOOL STANLEY HOSPITAL.—Lady Honorary Medical Officer for Women's Diseases.

MANCHESTER CHORLTON-UPON-MEDLOCK DISPENSARY.—Resident House Surgeon, unmarried. Salary £120 per annum, with rooms and attendance.

MANCHESTER, UNIVERSITY OF.—Junior Demonstrator in Physiology. Salary £100, rising to £150 per annum.

NORWICH, NORFOLK AND NORWICH HOSPITAL.—Surgeon and Assistant Surgeon.

OXFORD, LITTLEMORE PAUPER LUNATIC ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £150 per annum, with rooms and board.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House Surgeon for six months, renewable. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL DENTAL HOSPITAL OF LONDON.—Demonstrator in Mechanical Pupils' Department. Salary £120, rising to £150.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Surgeon, unmarried. Salary £50 per annum, with board and lodging.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months Salary at rate of £40 per annum, with board, washing, and residence.

WANDSWORTH UNION INFIRMARY, St. John's-hill, near Clapham Junction.—Junior Assistant Medical Officer, for six months. Salary at rate of £100 per annum, with board, lodging, and washing

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £70 per annum, with rooms, board, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Whaley Bridge, in the county of Chester, and at Staindrop, in the county of Durham.

Births, Marriages, and Deaths.

BIRTHS.

BENNETT.—On June 28th, at Hillcrest, Northwood, the wife of Norman G. Bennett, M.A., M.B., B.C., L.D.S., of a daughter.

EYRE.—On June 7th, at Holmsdale, Wandsworth Common, to Dr. and Mrs. Eyre, a son.

GORDON-WILSON.—On July 1st, at Philbeach-gardens, South Kensington, the wife of Dr. A. Gordon-Wilson, of a son.

HANCOCK.—On June 28th, at Escott, Streatham, the wife of W. Ilbert Hancock, F.R.C.S., of a son.

HAY.—On July 2nd, at Lincoln-road, Peterborough, the wife of William Peach Hay, M.B. and C.M., of a daughter.

JOHNSON.—On June 29th, at Ellerker-gate, Richmond-hill, Surrey, the wife of John Robert Johnson, M.R.C.S., L.R.C.P., of a daughter.

PARK.—On June 26th, at Knighton, Radnor, the wife of Wm. Norris Park, M.B., of a daughter.

MARRIAGES.

LEEMING—LAMPREY.—On June 28th, at Wandsworth Common, Arnold Leeming, M.B., B.S. Lond., M.R.C.S., L.R.C.P., of Sudbury, Suffolk, elder son of Joseph Leeming, F.R.I.B.A., to Annie Maud, elder daughter of Charles Lamprey, Westwood Tower, Wandsworth Common.

ROOKE—GOODMAN.—On June 27th, at Christ Church, Guildford, W. Stanley Rooke, M.R.C.S., L.R.C.P., of Fairfield, North Finchley, to Elsie May, eldest daughter of Sir William Goodman, of Clavadel, Guildford, late Chief Justice of Hong-Kong.

STAFFORD—NIBLOCK.—On June 27th, at St. Michael's Church, Bournemouth, A. M. Stafford, M.B., to Miss Mary Niblock, daughter of the late Mr. J. Niblock.

STOCKWELL—COSTIGAN.—On July 3rd, at the Parish Church, St. Marylebone, G. E. St. Clair Stockwell, M.B., B.C. Cantab., to Gertrude Frances, second daughter of the late Thomas Costigan, Esq., of Birmingham.

WHARTON—ORME.—On June 28th, at the Baptist Church, King-street, Oldham, Alwyn Wharton, M.B., Ch.B., to Katie, only daughter of Daniel Orme, Wellington House, Oldham.

N.B.*—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A POINT IN POOR-LAW.

A CORRESPONDENT recently asked us: "Am I as a Poor-law medical officer to attend paupers removed to an isolation hospital (not under the control of the guardians) by order of my relieving officer, such hospital being situated in my district?" The point is an interesting one and others of our readers may have been in a similar difficulty. There is no option in the matter if the isolation hospital is situated within his district and has no special medical officer appointed to attend to the inmates; the Poor-law medical officer must attend. The only remedy a Poor-law medical officer has when improperly directed by a relieving officer to attend a patient is to bring the matter before the guardians at their next meeting, but in the meantime he should obey the order. Of course, where a pauper has been sent into an institution where there is a medical officer appointed to take charge of all the inmates, then a Poor-law medical officer might be justified in disobeying an order to attend a pauper there, but the honorary secretary of the Poor-law Medical Officers' Association, Dr. Major Greenwood, informs us that he has never known an instance of an order of attendance being given in such circumstances. Where the medical officer of health has charge of an isolation hospital and is specially appointed with such a charge he should receive a special stipend for extra work, as it does not necessarily belong to his duties.

SIGHT DEFECTS AMONGST THE GENERAL POPULATION.

To the Editors of THE LANCET.

SIRS,—May I ask if any of your readers will furnish me with information bearing on the following subject? Are there any available statistics, reliable and ample, relative to the increase and prevalence of eye defects amongst the general population of this country other than those recently issued by certain of the local educational authorities? In asking for this information I do not refer to the statistics obtainable at the several eye hospitals, as obviously these relate only to the patients of these institutions and do not, except indirectly, affect the subject of the conditions of eyesight deficiency amongst the general population. Further, may I ask where, if at all, I can obtain similar information relative to the general population of the United States?

I am, Sirs, yours faithfully,

London, June 28th, 1906. VIATOR.

PRESTON'S WATER WITH A FISHY SMELL.

COMPLAINTS of the water-supply of Preston having a fishy smell led to a discussion at a council meeting on June 29th. One member thought that the smell attributed to the Grimsargh reservoir really came from "a neighbouring sewage works." The reservoir and the sewage works do not seem well-assorted neighbours. Another gentleman thought that there were too many fish in the reservoir, while a third did not think that any number of fish would affect the water. He thought that the smell was due to the great numbers of shell-fish and had heard of cases where fish had been put in to preserve the purity of the water. Dr. Brown, chairman of the health committee, thought that the "dead ends" of the pipes were the source of the trouble. As bearing on this question there may be recalled a similar complaint made several years ago of the fishy smell of the water in some of the Manchester reservoirs. It happened fortunately that Mr. Estcourt, the chemist of the corporation, was also a fisherman. The reservoir was full of small water-snails but contained no fish to keep down their numbers and he advised the introduction of trout. In a short time the nuisance subsided and has not recurred. In all probability the same explanation and the same remedy, as suggested by one of the members, will be found applicable.

THE LEGISLATURE AND VIVISECTION.

A WRITER above the signature "Canny Scot" takes in the columns of the *Tribune* shrewd vengeance upon Mr. A. Lupton, M.P., who recently informed the readers of that excellent paper that "everybody now knows what the word vivisection means and what the practice is." "Canny Scot" proves that Mr. Lupton, at any rate, has no share in this general knowledge. "I do not know," writes "Canny Scot," "why Mr. Lupton should apply the contemptuous word 'clique' to vivisectors, for they are in no way banded together; they form no offensive or defensive associations; they hold no exclusive meetings; they conduct no political propaganda; in fact, they have no interest to serve save the furtherance of the knowledge of disease and how best to combat it—surely a sufficiently high aim to save them from ungenerous detractors. Mr. Lupton may be able in the future to supply us with a little from his store of knowledge of the 'abhorrent practice'; at the present time, where his facts are not wrong, his conclusions are illogical. It is not essential, as he says, for a student studying for the London M.D. ever to witness a single experiment on any animal coming within the scope of the Vivisection Acts; it is not essential for him to perform any such experiments; and he is never asked by an examiner to perform a vivisection experiment during the examination, for such a

thing would be illegal. Mr. Lupton talks about vivisectors holding important salaried posts. I hope he does not mean to insinuate that the salary is important. May I tell him a little secret? If he were to take the average salary of British vivisectors he would probably find that in comparison his Chinese labourer on the Rand was living in a compound affluent paradise." "Canny Scot" then points out that the facts that in 1876 there were 23 vivisectors and in 1904 366 do not prove that the law has encouraged men to engage in the practice. "I suppose," he says, "there are more motor-cars in use this year than there were three years ago, but I am sure the increase is not due to the issuing of licences. Within the last 30 years the modern advance in medicine has taken place; surgery has almost wholly changed during that time, while bacteriology and pathology in general have grown from comparative nothingness. To these he may attribute the increase in vivisection experiments." Alas, it is more than probable that the good humour and good sense of the corrections will be passed by unheeded by Mr. Lupton.

A POINT IN POOR-LAW.

To the Editors of THE LANCET.

SIRS,—Is not a workhouse medical officer entitled to £2 for instrumental midwifery in a difficult case of childbirth and entailing considerable attendance afterwards? I know a medical officer of a workhouse who always is paid that fee. A district medical officer always gets it. I am told it is always paid in London to workhouse medical officers.

I am, Sirs, yours faithfully,

July 2nd, 1906. M.P.

UNMANNERLY.

To the Editors of THE LANCET.

SIRS,—The following incident is, I hope, unique. I was rung up by A, a patient, who employs a large number of men, and told that one, B, who is a foreman in A's establishment, was very ill—he was, in fact, said to be almost *in extremis*. I was asked if I would kindly see B on A's behalf and let him (A) know whether anything could be done to relieve or to help him. A also asked what was the "etiquette" in such a case; Dr. D was attending B. I replied that Dr. D must be approached and should be told that Mr. A, the employer of B, would be glad if Dr. D would meet Mr. A's own medical attendant, Dr. C—i.e., the present writer—in consultation. This would show Dr. D, I suggested, that Mr. A desired to be pecuniarily responsible for the whole business. Mr. A accordingly sent his son and partner on this errand and promised to let me know later what time Dr. D had fixed for consultation. I was astonished later to receive the following statement from Mr. A's son. He had seen Dr. D. Dr. D was annoyed and had asked who was Dr. C. He was told that he was another general practitioner living some two and a half miles away. Dr. D then flatly refused to see anyone else in consultation. He asserted that he was as good as any other general practitioner—a fact that was not in issue—and that he was not going to surrender his patient to any other man's treatment. Pressed further, he said that he would meet Dr. E, a consultant, but no one else. And there, so far as I was concerned, the matter ended. I was naturally rather vexed at receiving such a singularly uncivilised message through the agency of my own patient, although Mr. A took the trouble to state very plainly what he thought of Dr. D. What should I do? Personally I think I had better do nothing. I might add as facts relevant to the issue that Dr. D is L.R.C.S., L.R.C.P. Edin., while as you will see by reference to the Directory, I am certainly on the staff of a hospital. I inclose my card, and am,

Yours faithfully,

June 26th, 1906. M.D. Lond.

*** We agree with our correspondent that he should do nothing. The story as it is told reflects badly on Mr. D.—ED. L.

ST. LUKE'S HOME FOR THE DYING POOR.

AT a drawing-room meeting on behalf of this charity recently held by permission of Mrs. R. W. Perks at Kensington Palace Gardens, statements were made by Mr. A. Pearce Gould and Mr. Howard Barrett to show that the safety and protection of public health might consist in the multiplication of such homes. The majority of the patients seeking refuge were suffering from pulmonary tuberculosis or cancer and in regard to the first of these, at any rate, the cause of public health is served by removing sources of infection from crowded centres. Mr. Arnold White, who took the chair, commented on the fact that even the most debased savage crept away into some quiet corner to die and maintained that the natural instinct for privacy and dignity in dying was denied to our poor at home. The meeting was a cordial one and some substantial promises of assistance were received from the guests. The patroness of the charity is Her Majesty the Queen and full particulars will be gladly given by the honorary secretary, Miss Helen E. Don, St. Luke's House, 14, Pembridge-square, Bayswater, W.

Spes.—The regulations differ in different States. If our correspondent will send in his name and the date of his diplomas, and will also indicate the State in which he intends to practise, we may be able to tell him what he wants to know.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (14th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (10th).—SOCIETY FOR THE STUDY OF INEBRIETY (11, Chandos-street, Cavendish-square, W.).—3.30 P.M.: Council Meeting. 4 P.M.: Discussion on the Relations of Inebriety and Crime (opened by the Rev. Canon J. W. Horsley).

WEDNESDAY (11th).—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M.: Meeting.

THURSDAY (12th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M.: Specimens will be shown by Dr. Macnaught-Jones, Dr. J. Aarons, and Dr. C. Maunsell. Papers:—Dr. J. Oliver: A Study of Hydatidiform Mole, with Records of Three Typical Cases.—Dr. Macnaughton-Jones: Remarks on Closure of Small Recto-vaginal Fistula involving the Sphincter.

FRIDAY (13th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M.: Card Specimens. 8.30 P.M.: Papers:—Mr. W. T. H. Spicer: Intraocular Infectives.—Mr. A. R. Brailey: Congenital Distichiasis.—Mr. C. H. Usher (Aberdeen): A Note on the Choroid at the Macular Region. Annual General Meeting. Election of Officers for 1906-07.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M.: Dr. J. Galloway: Clinique. (Skin.) 5.15 P.M.: Lecture:—Mr. B. Harman: Blepharitis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Eye. 5 P.M.: Lecture:—Mr. Dunn: Ocular Diseases of Childhood.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Sir D. Duckworth: Medicine. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. St Clair Thomson: Throat and Ear. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

CHARING CROSS HOSPITAL.—4 P.M.: Dr. Routh: Demonstration (Gynæcological). (Post-Graduate Course.)

TUESDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. T. Williams: Clinique. (Medical.) 5.15 P.M.: Lecture:—Dr. L. Smith: Some Points in the Treatment of Epilepsy.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. Diseases of the Throat, Nose, and Ear. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Skin. 5 P.M.: Lecture: Dr. Moullin: Retroflexion, Symptoms and Treatment.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. T. Hewlett: Medicine. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. A. Turner: Speech Defects.

WEDNESDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. T. P. Legg: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. C. O. Hawthorne: Pulse Tracings and their Clinical Significance.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. Diseases of Children. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. 5 P.M.: Lecture:—Dr. Beddard: Practical Medicine.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. P. Taylor: Medicine. 3.15 P.M.: Mr. M. Robson: Surgery. 4 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Demonstration:—Dr. Abercrombie: Nose.

THURSDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Mr. H. S. Clogg: Peritonitis in Children.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Eye. 5 P.M.: Lecture:—Mr. Baldwin: Practical Surgery.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Mr. M. Davidson: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M.: Lecture:—Dr. Thursfield: Secondary Anæmias in Children.

FRIDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. R. Clarke. Clinique. (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. Diseases of the Throat, Nose, and Ear. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Skin. 5 P.M.: Lecture:—Mr. Lloyd: Anæsthetics and their Administration.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Bradford: Medicine. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Mr. Ballance: Surgery of the Nervous System.

SATURDAY (14th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

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Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

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MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1906, which was completed with the issue of June 30th, and the Title-page to the Volume, are given in this number of THE LANCET.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 5th, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
June 29	29·77	N.E.	2·01	106	55	51	51	51	Raining
,, 30	30·13	N.E.	0·17	113	63	43	48	55	Cloudy
July 1	30·12	S.W.	...	105	63	52	55	60	Fine
,, 2	30·10	S.E.	...	112	68	54	54	60	Fine
,, 3	30·12	E.	...	114	70	55	58	61	Fine
,, 4	30·12	N.E.	...	117	76	54	57	63	Fine
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